

AC 4432
Gloucestershire County Council.

26TH OCTOBER, 1914.

ANNUAL REPORT
OF
The Medical Officer of Health
INCLUDING A
Summary of the Annual Reports
OF THE
MEDICAL OFFICERS OF HEALTH
IN THE
ADMINISTRATIVE COUNTY OF GLOUCESTER
FOR 1913.

SHIRE HALL, GLOUCESTER,

17TH SEPTEMBER, 1914.

Gloucestershire County Council.

26TH OCTOBER, 1914.



ANNUAL REPORT

OF

The Medical Officer of Health

INCLUDING A

Summary of the Annual Reports

OF THE

MEDICAL OFFICERS OF HEALTH

IN THE

ADMINISTRATIVE COUNTY OF GLOUCESTER

FOR 1913.



SHIRE HALL, GLOUCESTER,

17TH SEPTEMBER, 1914.



Digitized by the Internet Archive
in 2017 with funding from
Wellcome Library

<https://archive.org/details/b29259885>

INDEX.

	PAGE
Acute Polio-myelitis...	27
Adoptive Acts, &c. ...	69
Annual Reports—Printing of ...	7
" " Date received ...	8
Areas, Population, &c. ...	9
Average Fatality of Scarlet Fever, Diphtheria and Typhoid Fever	19
Bacteriological Examinations ...	38
Birth Rates ...	12
Bye-laws ...	69
Cerebro-Spinal Meningitis ...	26
Death Rates ...	14
Diphtheria ...	23
Disinfection ...	47
Disposal of House Refuse ...	65
Food Supplies ...	67
Food and Drugs Acts ...	68
Health Visitors and the Co-ordina- tion of Public Nursing ...	73
Housing ...	49
Illegitimate Births ...	14
Infantile Mortality ...	16
" " illegitimate ...	17
Infectious Diseases notified 1913 ...	18
Isolation Hospitals ...	40
Midwives Act, 1902 ...	70
Notifiable Diseases ...	18
Non-Notifiable Infectious Diseases...	37
Nurses' Exchange ...	46
Occupations ...	10
Ophthalmia Neonatorum ...	28
Population ...	9
Puerperal Fever ...	26
Reports, Special—Dates of Receipt ...	9
Reports (Summaries) of Medical Officers of Health for :—	
Awre Urban District ...	81
Charlton Kings " " ...	83
Cheltenham Borough ...	85
Cirencester Urban District ...	89
Coleford " " ...	92

Reports, Summaries of Medical Officers of Health for :—						PAGE
Kingswood	Urban District	...	...	...	...	94
Nailsworth	" "	...	...	...	...	97
Newnham	" "	...	...	...	...	100
Stow-on-the-Wold	" "	...	...	...	...	102
Stroud	" "	...	...	...	...	104
Tetbury	" "	...	...	...	...	107
Tewkesbury Borough		...	...	...	...	110
Westbury-on-Severn	Urban District	...	...	...	...	113
Campden	Rural District	...	...	...	...	115
Cheltenham	" "	...	...	...	...	119
Chipping Sodbury	" "	...	...	...	...	122
Cirencester	" "	...	...	...	...	126
Dursley	" "	...	...	...	...	129
East Dean and United Parishes	Rural District	...	...	...	...	133
Faringdon	Rural District	...	...	...	...	136
Gloucester	" "	...	...	...	...	138
Lydney	" "	...	...	...	...	141
Marston Sicca	" "	...	...	...	...	144
Newent	" "	...	...	...	...	146
Northleach	" "	...	...	...	...	148
Pebworth	" "	...	...	...	...	150
Stow-on-the-Wold	" "	...	...	...	...	153
Stroud	" "	...	...	...	...	156
Tetbury	" "	...	...	...	...	159
Tewkesbury	" "	...	...	...	...	162
Thornbury	" "	...	...	...	...	164
Warmley	" "	...	...	...	...	167
West Dean	" "	...	...	...	...	170
Wheatenhurst	" "	...	...	...	...	173
Winchcombe	" "	...	...	...	...	177
Rivers Pollution	...	...	...	...	...	64
Small-pox	...	...	...	...	...	19
Scarlet Fever	...	...	...	Table XIV.	...	21
Schools	...	...	...	...	...	48
Sewerage and Sewage Disposal	...	...	...	...	...	60
Staff, Changes in	...	...	...	...	...	7
Tuberculosis	...	...	...	Table XVII.	...	29
Typhoid Fever	...	...	...	Table XVI.	...	25
Vaccination	...	...	...	...	...	19
Vital Statistics	Tables IV., V. (A and B), VI., VII., VIII., IX. (A and B), X. and XI.				...	11
Water Supply	...	...	...	Table XXI.	...	55

Gloucestershire County Council.

ANNUAL REPORT, 1913.

HEALTH DEPARTMENT,

SHIRE HALL,

GLOUCESTER,

17th June, 1914.

*To the Chairman and Members
of the Public Health and Housing Committee.*

GENTLEMEN,

Though the accompanying summary of the Annual Reports for 1913 is not quite complete, it is desirable that the information so far available should be laid before you without delaying its presentation until the one outstanding Report is received, that for the Newent Rural District. As usual the preparation of the summary has been attended with some difficulty owing to the late arrival of a few Reports, but on the whole they were received a little more promptly than usual.

The combination of the appointments of Medical Officer of Health and School Medical Inspector has proved satisfactory in three of the groups, but in the fourth—West Gloucestershire United Districts—there appear to be exceptional circumstances which have prevented the same result, and the matter is now under consideration.

Progress has been made in connection with the Housing question, and building has been undertaken by Local Authorities in various parts of the County; on the other hand the systematic inspection advances slowly, and in some districts is not undertaken so energetically as it should be.

The year was marked by a very unusual prevalence of scarlet fever, fortunately of a mild type generally, though in one or two areas the disease appears to have assumed a more malignant form. Only slight progress was made in increasing the accommodation for cases of infectious disease, which at present cannot be regarded as other than very inadequate, except in comparatively few districts.

Information is at present incomplete as to the vital statistics for the year, but I hope that the death rates will be found fairly low. In connection with the subject of infantile mortality, I have given a resumé of the suggestions for the combination of Health Visiting with Tuberculosis and School Nursing, and I venture to hope that, during the present year, effect may be given—if only partially—to the proposals. (See p. 73).

I have the honour to remain. Gentlemen,

Your obedient servant,

J. MIDDLETON MARTIN,

County Medical Officer of Health.

17th September, 1914.

Postscript.

The outbreak of the war which occasioned the sudden departure of four out of five clerks has further delayed the issue of this Report, and it is with regret that I have only now been able to present it in its complete form.

J. M. M.

CHANGES IN STAFF.

There have been no changes in the appointments of Medical Officers of Health since the date of my last Report, except that Dr. Blake resigned his appointment in the Wheatenhurst Rural District on the 1st April, 1913, on its being merged into the East Gloucestershire United District. Dr. Rhind did not take over the South Gloucestershire United Districts until the 1st of February, 1913, and Deputy Surgeon-General Andrews did not assume office until the end of July, 1913. Among the Sanitary Inspectors there were two changes: Mr. E. G. Hampshire, Mem. R. San. Inst., succeeded Mr. Mantell in the Northleach Rural District, and Mr. T. Daniels, Sanitary Inspector of the Wheatenhurst Rural District, died, but I have no information as to the appointment of his successor.

RECEIPT AND PRINTING OF REPORTS.

The number of the Annual Reports to be summarised is the same as in the previous two years, namely 35: of these 19—the same as in 1912—arrived by the 1st May and 11 more during that month; but at the time of writing there is still one outstanding Report, that for the Newent Rural District.

All the Reports either are or will be printed this year, but four have so far been presented in draft. It is satisfactory to note that both Reports which were not printed last year, those for Kingswood Urban and Stow-on-the-Wold

Rural Districts, have been given this permanent form, and are available for the information of all the Members of the District Councils.

TABLE I.

Date of Receipt of Report		District						Report printed or not printed
1914								
March	11	...	Marston Sicca Rural	...	...	...	...	Printed
"	11	...	Winchcombe Rural (part of)	...	...	...	...	"
"	24	...	Cirencester Urban...	...	...	...	...	"
"	24	...	Tetbury Urban	...	...	...	...	"
"	24	...	Cirencester Rural	...	...	...	...	"
"	24	...	Tetbury Rural (part of)	...	...	...	...	"
"	24	...	Wheatenhurst Rural	...	...	...	...	"
"	25	...	Coleford Urban	...	...	...	...	"
"	31	...	Northleach Rural	...	...	...	...	"
April	8	...	Awre Urban	...	...	...	...	"
"	8	...	Newnham Urban	...	...	...	...	"
"	8	...	Westbury-on-Severn Urban	...	...	...	...	"
"	8	...	East Dean and United Parishes Rural...	...	...	...	...	"
"	8	...	Gloucester Rural	...	...	...	...	"
"	8	...	Lydney Rural	...	...	...	...	"
"	9	...	Chipping Sodbury Rural	...	...	...	...	"
"	9	...	Thornbury Rural	...	...	...	...	"
"	16	...	Pebworth Rural	...	...	...	...	"
"	23	...	Faringdon Rural (part of)	...	...	...	...	"
May	4	...	Charlton Kings Urban	...	...	...	...	"
"	5	...	Campden Rural	...	...	...	...	"
"	6	...	West Dean Rural	...	...	...	...	"
"	12	...	Nailsworth Urban...	...	...	...	...	"
"	13	...	Stroud Urban	...	...	...	...	"
"	15	...	Stroud Rural	...	...	...	...	"
"	18	...	Cheltenham Rural...	...	...	...	...	"
"	21	...	Cheltenham Borough	...	...	...	...	"
"	25	...	Stow-on-the-Wold Urban	...	...	...	...	"
"	25	...	Dursley Rural	...	...	...	...	"
"	30	...	Stow-on-the-Wold Rural (part of)	...	...	...	...	"
June	3	...	Warmley Rural	...	...	...	...	Typewritten*
"	4	...	Tewkesbury Borough	...	...	...	...	Written*
"	6	...	Tewkesbury Rural (part of)	...	...	...	...	Written*
"	6	...	Kingswood Urban...	...	...	...	...	Printed
July	11	...	Newent Rural (part of)	...	...	...	...	"

*Will be printed

SPECIAL REPORTS.

The following Special Reports were received from Medical Officers of Health during 1913 :—

January 3rd. East Dean R.D.—Report on a case of Small-pox at Lydbrook.

March 14th. Cirencester U.D.—Report on an outbreak of fatal Sickness in Cirencester.

June 5th. Kingswood U.D.—Report on an outbreak of Diphtheria at Hanham.

October 16th. Chipping Sodbury R.D.—Frome Brook.

October 27th. Chipping Sodbury. — Correspondence of Parish Councils as to Housing.

POPULATION.

Since the publication of my last Report five further volumes of the Census taken on the 2nd April, 1911, have been issued:—

Volume VII.—Ages and Condition as to Marriage.

„ VIII.—Tenements.

„ IX.—Birthplaces.

„ X.—Occupations and Industries.

„ XI.—Infirmities.

Certain local particulars have been extracted from these volumes, and some with respect to tenements will be found in a later section of this Report (see p. 50)

As regards occupation, a summary is given in Table II. of the proportion of occupied persons engaged in the 22 branches of work into which the Registrar General classifies industries, showing the changes which occurred between 1901 and 1911. In respect of occupied males there has been a decrease, particularly in the proportion engaged in building, and increases in the percentages engaged in agriculture, metal and machinery, and in the provision of food, tobacco and lodging; females show decreases chiefly under the headings of domestic service, dress and chemicals, and increases under those of local government, commercial, agriculture, metals and machinery, paper and stationery, and provision of food, tobacco and lodging. The proportions of occupied males and females in 1911 were practically the same as in 1901: the percentage of males increased from 81.1 in 1901 to 81.5 in 1911, and of females decreased from 30.8 to 30.7. The greatest difference was in the proportion of occupied males in the total Urban Districts, which rose from 78.6 % in 1901 to 79.3% in 1911.

Gloucestershire is mainly an agricultural County, over 24% of occupied males (24,409 persons) being engaged in agriculture as compared with 19% for England and Wales. In the Forest of Dean and in the extreme south of the County are collieries employing about 8,000 males; in the woollen cloth mills in the Stroud neighbourhood about 3,200 hands are engaged, including about 1,300 males and 1,900 females. In the Kingswood Urban District about 2,400 persons (1,700 males and 700 females) are employed in

TABLE II.
OCCUPATIONS.
ADMINISTRATIVE COUNTY.

		CENSUS—1901.				CENSUS—1911.			
		MALES		FEMALES		MALES		FEMALES	
		No.	%	No.	%	No.	%	No.	%
I.	Local Government	1,479	1·5	392	·9	1,688	1·7	544	1·3
II.	Defence	870	·9	...	...	448	·4	...	...
III.	Professional	3,061	3·1	3,467	8·1	3,156	3·1	3,628	8·4
IV.	Domestic Service	5,504	5·6	22,145	51·9	6,540	6·5	20,756	48·1
V.	Commercial	2,498	2·6	242	·6	2,988	3·0	478	1·1
VI.	Conveyance	9,244	9·4	115	·3	9,068	9·0	101	·2
VII.	Agriculture	22,907	23·4	804	1·9	24,409	24·3	1,355	3·1
VIII.	Fishermen	92	·1	...	...	117	·1	...	...
IX.	Mines and Quarries	8,575	8·8	19	·04	8,943	8·9	27	·06
X.	Metals and Machinery	5,377	5·5	281	·7	6,701	6·7	422	1·0
XI.	Precious Metals, Watches, Gems	565	·6	54	·13	443	·4	64	·15
XII.	Building, &c.	11,043	11·3	5	·01	9,149	9·1	6	·01
XIII.	Furniture and Decorative	1,769	1·8	106	·25	1,810	1·8	125	·3
XIV.	Brick, Cement and Pottery	619	·6	43	·1	583	·6	90	·2
XV.	Chemicals, &c.	543	·6	190	·4	474	·5	94	·2
XVI.	Skins, Leather, &c.	465	·5	20	·05	579	·6	60	·1
XVII.	Paper and Stationery	890	·9	322	·8	1,033	1·0	512	1·2
XVIII.	Textile	2,020	2·1	3,043	7·1	1,925	1·9	2,929	6·8
XIX.	Dress	5,884	6·0	8,650	20·3	6,150	6·1	7,964	18·4
XX.	Food, Tobacco, Lodging	7,153	7·3	2,316	5·4	7,806	7·8	3,386	7·8
XXI.	Gas, Water, Electric, Sanitary	489	·5	...	...	540	·5	...	...
XXII.	General and Undefined	6,860	7·0	453	1·1	6,154	6·1	648	1·5
Total occupied		97,907	81·1	42,667	30·8	100,704	81·5	43,189	30·7
XXIII.	Unoccupied	22,787	18·9	95,977	69·2	22,929	18·5	97,275	69·3
Total occupied and unoccupied		120,694	...	138,644	...	123,633	...	140,464	...

TABLE III.

Area of Districts, Houses, Population, Average Number of Persons per 100 Acres, &c.
From Revised Report on Census, 1911, and Assessable Value from County Rate Basis, 1911.

	Area in Acres from 1911 Census.	Assessable Value from County Rate Basis, 1911.			Families or separate Occupiers.		Houses.						Population.				Average No. of Persons.				
		Total.	Per Acre.	Id. Rate.	1901.	1911.	Inhabited.		Uninhabited.		Being Built.		1901.	1911.	1901-1911. Increase or Decrease.		Per 100 Acres, 1911.	Per Inhabited Building.			
							1901.	1911.	1901.	1911.	1901.	1911.			No.	%		1901.	1911.		
Urban Districts—		£	£	£																	
Awre	4,317	9,988	2.3	42	258	264	258	264	35	20	2	2	1,096	1,070	—	26	—	2.4	25	4.25	4.05
Charlton Kings	3,399	24,692	7.3	103	885	1,102	874	1,094	37	59	8	11	3,806	4,495	+	689	+	18.1	132	4.35	4.11
Cheltenham	4,726	302,060	63.9	1,258.5	11,036	11,346	10,352	10,623	818	824	57	31	49,439	48,942	—	497	—	1.0	1,036	4.78	4.61
Cirencester	5,286	36,004	6.8	150	1,660	1,756	1,621	1,687	136	64	13	3	7,536	7,631	+	95	+	1.3	144	4.65	4.52
Coleford	2,060	6,468	3.1	27	580	605	579	599	48	38	—	2	2,541	2,604	+	63	+	2.5	126	4.39	4.35
Kingswood	1,530	31,092	20.4	129.5	2,454	2,736	2,446	2,709	196	136	48	3	11,961	12,700	+	739	+	6.2	833	4.89	4.69
Nailsworth	1,596	10,552	6.6	44	762	774	744	769	54	28	—	2	3,028	3,031	+	3	+	.1	190	4.07	3.94
Newnham	1,937	8,988	4.6	37	267	256	266	250	31	39	—	2	1,184	1,021	—	163	—	13.8	53	4.45	4.08
Stow-on-the-Wold	45	3,452	76.7	14	335	339	325	334	40	21	1	2	1,386	1,301	—	85	—	6.1	2,891	4.26	3.90
Stroud	1,168	35,772	30.6	149	2,004	2,052	2,003	2,024	209	130	8	6	9,153	8,767	—	386	—	4.2	750	4.57	4.33
Tetbury	114	5,636	49.4	24	464	452	454	445	40	40	1	—	1,989	1,758	—	231	—	11.6	1,542	4.38	3.95
Tewkesbury	2,532	22,664	8.95	94	1,251	1,266	1,226	1,204	105	73	5	1	5,419	5,287	—	132	—	2.4	209	4.42	4.39
Westbury-on-Severn	8,257	17,448	2.1	73	424	401	422	400	47	53	—	1	1,866	1,812	—	54	—	2.9	22	4.42	4.53
Total—Urban Districts	36,967	514,816	13.9	2,145	22,380	23,349	21,570	22,402	1,796	1,525	143	66	100,404	100,419	+	15	+	.015	271.5	4.65	4.48
Rural Districts—																					
Campden	23,726	31,912	1.3	133	1,345	1,370	1,319	1,363	148	98	14	—	5,441	5,597	+	156	+	2.9	24	4.13	4.11
Cheltenham	18,401	37,216	2.0	155	1,046	1,239	1,034	1,226	60	94	6	26	4,637	5,254	+	617	+	13.3	28.5	4.48	4.29
Chipping Sodbury	69,736	113,192	1.6	472	4,951	4,919	4,888	4,860	317	323	15	8	22,104	20,955	—	1,149	—	5.2	30	4.52	4.31
Cirencester	80,991	58,772	.7	245	2,948	3,081	2,931	3,059	246	125	10	10	12,084	12,746	+	662	+	5.5	16	4.12	4.17
Dursley	26,876	57,212	2.1	238	2,801	3,000	2,753	2,928	248	177	5	11	11,636	12,233	+	597	+	5.1	46	4.23	4.18
East Dean and United Parishes	28,626	65,180	2.3	272	4,355	4,494	4,305	4,463	290	250	9	6	20,011	19,952	—	59	—	0.3	70	4.65	4.47
Faringdon (part of)	3,870	5,324	1.4	22	272	279	271	277	33	10	2	1	1,179	1,167	—	12	—	1.0	30	4.35	4.21
Gloucester	30,680	86,192	2.8	359	2,153	2,594	2,062	2,578	172	157	33	23	10,779	12,615	+	1,836	+	17.0	41	5.23	4.89
Lydney	24,554	52,476	2.1	219	1,908	2,054	1,867	1,998	136	103	7	3	8,649	9,005	+	356	+	4.1	37	4.63	4.51
Marston Sicca	8,823	7,832	.9	33	385	403	384	398	24	47	2	3	1,485	1,609	+	124	+	8.4	18	3.87	4.04
Newent (part of)	35,540	39,780	1.1	166	1,658	1,669	1,649	1,632	133	122	2	1	7,067	6,964	—	103	—	1.5	20	4.29	4.27
Northleach	70,018	34,612	.5	144	1,971	1,995	1,931	1,972	195	156	5	1	8,100	8,056	—	44	—	0.5	11.5	4.19	4.09
Pebworth	17,326	17,508	1.0	73	703	766	693	739	62	47	—	1	2,944	3,239	+	295	+	10.0	19	4.25	4.38
Stow-on-the-Wold (part of)	42,203	34,772	.8	145	1,527	1,609	1,515	1,599	226	108	3	7	6,473	6,803	+	330	+	5.1	16	4.27	4.25
Stroud	37,223	107,956	2.9	450	6,740	7,023	6,635	7,005	613	477	18	29	27,793	28,068	+	275	+	1.0	75	4.19	4.01
Tetbury (part of)	26,300	19,700	.75	82	865	902	855	895	75	65	—	—	3,800	3,913	+	113	+	3.0	15	4.44	4.37
Tewkesbury (part of)	28,366	38,008	1.3	158	1,233	1,256	1,199	1,229	104	101	1	4	4,986	5,074	+	88	+	1.8	18	4.16	4.13
Thornbury	64,241	135,328	2.1	564	4,253	4,127	4,200	4,358	276	217	14	13	18,487	19,079	+	592	+	3.2	30	4.40	4.38
Warmley	10,089	53,096	5.3	221	3,396	3,809	3,367	3,774	207	265	86	11	15,945	17,188	+	1,243	+	7.8	170	4.74	4.55
West Dean	21,469	33,352	1.55	139	2,768	2,975	2,742	2,892	122	118	10	13	12,624	13,454	+	830	+	6.6	63	4.60	4.65
Wheatenhurst	24,462	43,260	1.8	180	1,505	1,518	1,496	1,511	149	173	3	2	6,105	6,093	—	12	—	0.2	25	4.08	4.03
Winchcombe (part of)	55,529	48,116	.9	200.5	2,083	2,272	2,048	2,255	192	136	4	1	8,709	9,531	+	822	+	9.4	17	4.25	4.23
Total—Rural Districts	749,049	1,120,796	1.5	4,670.5	50,866	53,654	50,144	53,011	4,028	3,369	249	174	221,038	228,595	+	7,557	+	3.4	30.5	4.41	4.31
Administrative County	786,016	1,635,612	2.1	6,815.5	73,246	77,003	71,714	75,413	5,824	4,894	392	240	321,442	329,014	+	7,572	+	2.4	42	4.48	4.36
Bristol	17,460	—	—	—	73,177	80,312	60,079	67,426	5,603	5,532	760	161	339,042	357,048	+	18,006	+	5.3	2,061	5.64	5.30
Gloucester	2,318	—	—	—	10,342	11,130	10,098	10,781	625	626	100	32	47,955	50,035	+	2,080	+	4.3	2,161	4.75	4.64
Whole County	805,794	—	—	—	156,765	168,445	141,891	153,620	12,052	11,052	1,252	433	708,439	736,097	+	27,658	+	3.9	91	4.99	4.79
England and Wales	37,337,537	—	—	—	7,036,868	8,005,290	6,260,852	7,141,781	448,932	408,652	61,909	38,178	32,527,843	36,070,492	+	3,542,649	+	10.9	97	5.20	5.05



TABLE VIII. (B)—RURAL DISTRICTS.

1914.

L.G.B. TABLE IV.—INFANTILE MORTALITY.

CAUSES	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total under 1 year	Camden	Cheltenham	Chipping Sodbury	Cirencester	Dursley	East Dean and United Parishes	Farington (part of)	Gloucester	Lydney	Marston Sicca	Newent (part of)	Northleach	Pewworth	Stow-on-the-Wold (part of)	Stroud	Tetbury (part of)	Tewkesbury (part of)	Thornbury	Warmley	West Dean	Wheatenurst	Winchcombe (part of)	
Uncertified	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Illegitimate	...	...	...	...	...	...	...	...	...	30	...	...	2	3	2	2	...	...	2	...	1	2	...	5	1	...	2	2	1	1	...	...	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlet Fever	...	...	...	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping Cough...	...	...	...	...	...	4	4	6	5	19	2	1	...	...	...	1	...	2	...	...	1	...	...	1	3	...	...	2	2	4	...	...	
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Tuberculous Meningitis...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Abdominal Tuberculosis...	...	...	...	...	...	...	1	...	2	3	...	...	...	...	...	2	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	
Other Tuberculous Diseases	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Meningitis (not Tuberculous)	...	...	...	1	1	1	...	2	...	4	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	
Convulsions	3	1	1	...	5	2	2	...	...	9	...	...	3	...	...	...	...	...	1	...	...	...	...	1	...	...	...	2	...	...	...	...	
Laryngitis...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	1	...	2	...	...	...	
Bronchitis...	1	1	...	...	2	4	5	2	4	17	...	1	1	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pneumonia (all forms)	1	1	...	...	2	6	1	9	10	28	...	...	5	...	1	4	...	1	1	...	...	...	2	1	...	1	1	4	2	1	2	1	
Diarrhoea	...	...	...	...	...	2	...	2	2	6	...	...	3	1	...	...	...	...	...	...	...	...	2	2	1	...	...	1	4	2	1	2	1
Enteritis	...	1	2	1	4	3	3	5	6	21	1	1	1	2	1	3	...	1	...	...	1	2	...	1	...	...	...	1	...	...	...	...	
Gastritis	...	...	...	...	...	1	1	2	...	4	1	...	...	1	...	...	...	...	1	...	...	2	...	1	...	...	1	1	...	3	2	...	
Syphilis	...	1	...	...	1	1	...	1	...	3	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	
Rickets	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	
Suffocation, overlying	5	1	...	...	6	...	...	1	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	
Injury at Birth	4	1	...	...	5	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	2	1	...	1	...	
Atelectasis...	5	...	...	...	5	...	...	...	...	5	...	...	...	...	1	1	...	...	...	...	...	1	...	2	...	...	1	...	1	...	...	...	
Congenital Malformation	10	2	1	2	15	1	...	2	...	18	...	2	...	1	...	3	...	1	...	...	...	...	1	...	1	...	...	...	1	...	...	...	
Premature Birth	69	9	4	4	86	2	...	...	...	88	2	3	7	4	10	15	...	2	2	...	1	...	...	1	2	...	2	3	...	...	...	2	
Atrophy, Debility and Marasmus	17	6	9	6	38	5	7	4	3	57	1	1	5	3	...	6	...	2	3	1	1	...	4	...	6	6	...	2	10	4	8	2	4
Other causes	11	1	2	3	17	5	5	4	6	37	...	...	2	2	4	5	...	...	1	...	...	1	...	4	7	1	...	2	8	4	2	2	
TOTAL	126	25	19	17	187	38	31	40	40	336	7	9	28	14	18	43	1	9	10	1	6	11	3	19	30	2	7	26	34	35	11	12	

TABLE XII. (A)—URBAN DISTRICTS.

1913.

L.G.B. TABLE II.—NOTIFIABLE INFECTIOUS DISEASE.

DISEASE	At all ages	AT AGES—YEARS.							Total cases removed to Hospital	Ayre	Charlton Kings	Cheltenham	Cirencester	Coleford	Kingswood	Nailsworth	Newnham	Stow-on-the-Wold	Stroud	Tetbury	Tewkesbury	Westbury-on-Severn
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards														
Cases removed to Hospital	...	...	...	...	...	...	...	...	...	...	9	346	19	...	10	8	2	...	44	...	2	...
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	150	...	22	102	16	8	2	...	45	...	3	49	16	2	62	2	...	1	15	...	...	...
Erysipelas	57	...	3	8	5	15	20	6	1	...	...	45	2	...	5	...	1	...	3	1	...	...
Scarlet Fever	490	3	98	322	41	24	2	...	385	...	7	335	20	1	62	8	6	14	32	...	2	3
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	14	...	...	1	4	4	5	...	8	...	...	11	...	...	1	1	...	...	...	...	1	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	5	...	...	...	...	5	...	...	1	...	...	3	...	1	1	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Polio-Myelitis	4	...	3	1	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	239	...	2	25	71	114	24	3	...	1	4	135	9	1	32	7	2	3	27	4	9	5
Other forms of Tuberculosis	47	...	1	13	17	10	5	1	...	1	1	25	4	1	6	1	1	...	6	...	...	1
TOTALS	1006	3	129	472	154	180	58	10	440	2	15	607	51	6	169	19	10	18	83	5	12	9

Cheltenham Borough—Pulmonary Tuberculosis cases removed to Hospital, 18; other forms of Tuberculosis, 4.
 Newnham U.D.—" " " " 2; " " 1.
 Tewkesbury Borough—" " " " 2; " " —

TABLE IX. (A)—URBAN DISTRICTS.

1913.

L.G.B. TABLE IV.—INFANTILE MORTALITY.

CAUSES	Under 1 week	1—2 weeks	2—3 weeks	3—4 weeks	Total under 1 month	1—3 months	3—6 months	6—9 months	9—12 months	Total under 1 year	Avre	Charlton Kings	Cheltenham	Cirencester	Coleford	Kingswood	Nailsworth	Newnham	Stow-on-the-Wold	Stroud	Tetbury	Tewkesbury	Westbury-on-Severn
Uncertified	3	...	...	...	3	...	...	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...
Illegitimate	...	...	...	...	...	...	...	...	...	22	...	2	13	...	2	...	1	...	1	...	...	3	...
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	1	...	...	3	4	...	...	1	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	3	...
Whooping Cough... ..	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...	...	2	...	...	1	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	2	2	...	...	1	...	...	...	...	...	...	...	...	1	...
Meningitis (not Tuberculous)	...	...	1	...	1	1	1	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...
Convulsions	1	...	1	...	2	1	...	2	...	5	...	...	4	...	...	1	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	1	...	...	1	5	1	1	1	9	...	...	2	...	...	4	...	...	...	...	...	...	...
Pneumonia (all forms)	...	1	1	...	2	4	2	7	4	19	...	...	9	...	2	6	...	...	1	2	...	...	...
Diarrhoea	...	...	...	...	...	5	2	2	...	9	...	2	5	...	1	1	...	...	...	...	...	2	...
Enteritis	...	1	1	...	2	2	1	4	4	13	...	...	8	...	...	1	...	...	...	4	...	...	...
Gastritis	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	1	...	...	...	...	...	1	...
Syphilis	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	...	1	...
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Suffocation, overlying	...	...	...	1	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...
Injury at Birth	3	...	...	...	3	...	...	...	...	3	...	...	2	1	...	...	...	...	...	...	...	...	...
Atelectasis... ..	6	...	...	...	6	...	...	...	...	6	...	...	3	...	...	...	...	...	...	...	...	...	...
Congenital Malformation	2	...	1	1	4	2	1	2	1	10	...	...	4	1	...	3	...	...	...	...	...	...	...
Premature Birth	20	8	...	2	30	2	...	1	1	34	...	4	15	4	2	...	3	...	2	2	...	2	...
Atrophy, Debility and Marasmus	6	3	3	1	13	8	2	2	1	26	1	...	3	3	...	6	2	1	...	5	2	3	...
Other causes	7	...	1	...	8	3	2	1	...	14	...	...	8	1	1	...	1	...	...	1	2	...	...
TOTAL	45	14	9	5	73	34	14	24	20	165	1	6	69	10	6	23	9	1	5	14	4	16	1

boot making; and in the Stroud Urban District some 900 persons (260 males and 640 females) in ready-made tailoring; much of this work in both places is done at home.

Various particulars of the population, &c., in the individual districts are given in Table III. The summary as regards the population in the Urban and Rural Districts is:—

				Census		Census		Estimated Population— Middle of 1913		County Estimate
				1901		1911		By District M.O.H.		
Urban	...	...	...	100,404	...	100,419	...	101,256	...	100,420
Rural	...	...	...	221,038	...	228,595	...	230,139	...	230,380
Administrative County				321,442	...	329,014	...	331,395	...	330,800

The rates for the County are based on the last figures, while those for the individual districts have been calculated on the populations estimated by the respective Medical Officers of Health.

VITAL STATISTICS.

The numbers of births (legitimate and illegitimate) which were registered in the sanitary districts are given in Table IV., and the numbers of deaths from certain diseases and at various age groups in Tables V. (A) and (B). The summary of the birth and death rates will be found in Table IV.

The Registrar General has arranged his last two Annual Reports so as to give information in considerable detail

concerning the vital statistics for Sanitary Districts, instead of, as formerly, limiting the particulars to Registration Districts. This renders the records of much greater interest in connection with sanitary administration and will enable comparisons to be made between districts and counties which were not possible without considerable labour under the old conditions. The records have the further advantage of being collated on a uniform basis and are, thereby, strictly comparable; statistics arranged by different reporters, useful as they may be, have not the same value.

Corrections for transferable births and deaths have been made by the various Medical Officers of Health, but from a comparison with the Registrar General's Reports so far issued, the corrections have not in all cases been made strictly in accordance with the instructions though the errors generally are small. It is to be hoped that in future years these differences will not appear.

BIRTH RATES.

Though the number of births registered has been steadily decreasing year by year, it is satisfactory to find that the fall was stopped, at least temporarily, in 1913 when the number (6,493) was slightly higher than in 1912 (6,403); this was almost entirely due to the rise in Urban Districts, the number in Rural Districts (4,651) being almost exactly the same as in 1912 (4,641). The rate in the whole County rose correspondingly from 19.4 to 19.6 per 1,000 of the population, but 20 years ago it ranged about 25.0. The

changes which have taken place in the birth rate in recent years will be seen in the following Table:—

TABLE VI.
BIRTH RATES.

Revised on 1911 Census.

	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
an	18.3	17.6	20.0	20.2	21.1	20.5	20.3	21.8	22.4	21.8	23.7	21.7
ul	20.2	20.2	20.9	21.3	21.85	23.2	22.1	23.1	23.6	23.15	24.9	21.9
Administrative County	19.6	19.1	20.6	20.95	21.6	22.1	21.6	22.9	23.25	22.95	24.6	23.9
land and Wales ...	23.9	23.8	24.1	24.8	25.6	26.5	26.3	27.1	27.2	27.9	28.4	28.5

The districts with the highest rates included, as usual, the colliery area in the west of the County: they are West Dean Rural (28.5), Newnham Urban (27.4), Coleford Urban (27.2), Awre Urban (25.4) and East Dean Rural (24.8) Districts. Those with the lowest were Westbury-on-Severn Urban (11.4), Stow-on-the-Wold Urban (14.6), Faringdon Rural (14.6), Marston Sicca Rural (15.8) Districts and Cheltenham Borough (15.8).

ILLEGITIMATE BIRTHS.

The following Table shows the proportion of illegitimate births per 1,000 total births in 1913 and previous years:—

TABLE VII.

% ILLEGITIMATE BIRTHS.

	1913		1912		1911		1910		1909		1908	
Urban Districts	...	5.4	...	4.5	...	6.4	...	5.8	...	4.9	...	5.3
Rural Districts	...	3.7	...	3.5	...	4.2	...	3.6	...	3.2	...	3.1
Administrative County	4.2	...	3.8	...	4.9	...	4.3	...	3.8	...	3.8	
England and Wales	...	—	...	4.3	...	4.3	...	4.1	...	4.1	...	4.0

(Certain districts have been omitted from the above Table, as the information was not available. The figures for 1912 and 1913 are complete.)

It is unsatisfactory to see the tendency for the proportion to rise again both in Urban and Rural Districts, and also to note the steady rise in the Country as a whole, as, apart from other reasons, the mortality amongst illegitimate children is so very much higher—on the average, nearly double—than amongst legitimate children.

DEATH RATES.

The number of deaths registered rose from 4,158 in 1912 to 4,320 in 1913 and, as the following table shows, there was a corresponding rise in the crude death rate from 12.6 to 13.05. This crude death rate corrected for the age and sex distribution of our population becomes 11.4, which compares favourably with the rate for England and Wales 13.4.

TABLE VIII.
DEATH RATES

revised on Census 1911.

	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
Urban	14.1	12.6	14.1	12.6	15.0	13.7	14.2	14.5	15.0	13.6	11.0	11.9
Rural	12.6	12.6	13.0	12.9	13.0	12.35	13.4	12.9	13.9	13.0	12.8	14.1
Administrative County	13.05	12.6	13.3	12.8	13.6	12.8	13.6	13.4	14.2	13.2	13.2	14.4
Ditto, corrected for Sex and Age Distribution	11.4	11.0	11.8	11.4	12.1	11.4	12.1	11.9	12.6	11.7	11.7	12.9
England and Wales ...	13.4	13.3	14.6	13.4	14.5	14.7	15.0	15.4	15.2	16.2	15.4	16.2

The increase occurred almost solely in the Urban Districts, and a closer investigation shows that it obtained chiefly between 25 and 65 years of age and was most marked in the second half of this period. The causes of death which showed a marked rise were cancer and organic diseases of the heart; other diseases to which increased numbers of death were attributed were measles, scarlet fever, diphtheria, typhoid fever, influenza, intestinal complaints, pulmonary and other forms of tuberculosis and infantile conditions. Diseases of the lungs (bronchitis and pneumonia) caused fewer deaths, the number from bronchitis (257) being the lowest in the records available since 1902, when the number was 436. It would be of interest to ascertain as accurately as possible the comparative incidence of the different causes of death in the various districts and parishes in the County;

with this in view I have commenced an investigation in continuation of one I made ten years ago, and when time is available I hope to collate the information I have collected.

INFANTILE MORTALITY.

Though the climatic conditions in 1913 were less favourable for infants than in 1912, it is satisfactory to see that the record low infantile mortality of 72 in 1912 rose only to 73 in 1913.

TABLE X.
INFANTILE MORTALITY.

	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904
Urban	90	70	114	86	103	97	98	93	116	111
Rural	67	73	87	72	72	77	76	77	94	90
Administrative County	73	72	95	76	81	83	82	81	100	96
England and Wales ...	109	95	130	106	109	121	118	132	128	115
Worcestershire ...		90	116	89	102	99	106	115	106	125
Warwickshire ...		79	115	89	97	100	99	124	109	133

The above Table shows that the increase occurred only in Urban Districts, the rate in Rural Districts reaching a record minimum of 67.

The total number of deaths was 477, 13 more than in 1912 (464), which was the lowest record; the actual number in Rural Districts—312—is the minimum and had it not been for the increase in the Urban Districts, the sum of the conditions would have been extremely good. The increase occurred at all the age groups, except 4-6 months,

TABLE IX. (A)—URBAN DISTRICTS.

1913.

L.G.B. TABLE IV.—INFANTILE MORTALITY.

CAUSES	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total under 1 year	Avon	Charlton Kings	Cheltenham	Cirencester	Coleford	Kingswood	Nailsworth	Newnham	Stow-on-the-Wold	Stroud	Tetbury	Tewkesbury	Westbury-on-Severn
Uncertified	3	...	...	...	3	...	...	...	...	3	...	...	3	...	...	...	...	...	...	...	...	...	...
Illegitimate	...	...	...	...	...	...	...	...	...	22	...	2	13	...	2	...	1	...	1	...	...	3	...
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	1	...	...	3	4	...	...	1	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	3	...
Whooping Cough... ..	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	...	1	...
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	...	2	2	...	...	1	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	1	...	1	1	1	...	...	3	...	...	3	...	...	...	...	...	...	...	...	1	...
Convulsions	1	1	...	...	2	1	...	2	...	5	...	...	4	...	...	1	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	1	...	...	1	5	1	1	1	9	...	...	2	...	...	4	...	...	...	...	...	...	...
Pneumonia (all forms)	...	1	1	...	2	4	2	7	4	19	...	...	9	...	2	6	...	...	1	2	...	...	...
Diarrhoea	...	...	...	...	...	5	2	2	...	9	...	2	5	...	1	1	...	...	...	...	...	2	...
Enteritis	...	1	1	...	2	2	1	4	4	13	...	...	8	...	...	1	...	...	...	...	...	...	...
Gastritis	...	...	...	...	...	...	2	...	...	2	...	...	...	...	...	1	...	...	4	...	...	...	...
Syphilis	...	...	...	...	...	...	...	1	1	2	...	...	...	...	...	1	...	...	...	...	...	1	...
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Suffocation, overlying	...	...	1	...	1	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...
Injury at Birth	3	...	...	...	3	...	...	...	...	3	...	...	2	1	...	...	...	...	...	...	...	...	...
Atelectasis... ..	6	...	...	...	6	...	...	...	...	6	...	...	3	...	...	...	...	...	...	...	...	...	...
Congenital Malformation	2	...	1	1	4	2	1	2	1	10	...	...	4	1	...	3	...	...	...	...	...	...	...
Premature Birth	20	8	...	2	30	2	...	1	1	34	...	4	15	4	2	...	3	...	...	...	...	2	...
Atrophy, Debility and Marasmus	6	3	3	1	13	8	2	2	1	26	1	...	3	3	...	6	2	1	...	5	2	3	...
Other causes	7	...	1	...	8	3	2	1	...	14	...	...	8	1	1	...	1	...	...	1	2	...	...
TOTAL	45	14	9	5	73	34	14	24	20	165	1	6	69	10	6	23	9	1	5	14	4	16	1

TABLE IX. (B)—RURAL DISTRICTS.

1913.

L.G.B. TABLE IV.—INFANTILE MORTALITY.

CAUSES	Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total under 1 year	Camden	Cheltenham	Chipping Sodbury	Cirencester	Dursley	East Dean and United Parishes	Faringdon (part of)	Gloucester	Lydney	Marston Sicea	Newent (part of)	Northleach	Peabworth	Stow-on-the-Wold (part of)	Stroud	Tetbury (part of)	Tewkesbury (part of)	Thornbury	Warmley	West Dean	Wheatenurst	Winchcombe (part of)
Uncertified	2				2					2						1												1				
Illegitimate										17	1			1	1	3			1					1	1		3	3	1	1		
Small-pox																																
Chicken-pox																																
Measles								1	3	4			1			2								1								
Scarlet Fever																																
Whooping Cough...			1		1	4	2	2		9			2								1	1		2	1				1	1		
Diphtheria and Croup							1			1	1																					
Erysipelas																																
Tuberculous Meningitis...							2	1		3				1													1					1
Abdominal Tuberculosis...																																
Other Tuberculous Diseases			1		1		1	1		3		1							1						1							
Meningitis (not Tuberculous)	1				1		2	1		4		1			1														2			
Convulsions		1	1	2	4	4	3	4	2	17	1		1	1	1	3		1			1				1			1	3	2		1
Laryngitis								1		1																		1				
Bronchitis				1	1	10	4	7	4	26			4	3		6		1	1						4			1	3	3		
Pneumonia (all forms)			1		1	6	8	4	8	27			2	1	2	3			2			1		2	2		1	1	3	2	2	3
Diarrhoea		2		1	3	4	5	1	1	14			2			7									2			1	1			1
Enteritis				2	2	4			2	8					1	1		1										2	3			
Gastritis						2	3	1	1	7	1			1													3	1	1			
Syphilis																																
Rickets																																
Suffocation, overlying						2				2											1				1							
Injury at Birth	5				5					5												1					1	1		1		1
Atelectasis...	6		2		8		1			9					1	2									2	1		1		2		
Congenital Malformation	4		1		5	2	1	1	1	10			2	1				1			1		1						1	2		1
Premature Birth	57	9	7	3	76	2				78	2	4	6	9	9	8	1	1	1	1		4		1	3		3	8	7	5	2	3
Atrophy, Debility and Marasmus	17	4	6	2	29	17	2	1	3	52	2		4			16		4	4	1			1	3	2			2	5	7		1
Other causes	7	2	1	2	12	6	8	2	4	32			4	1	1	1		2	2		2	2			2		1	5	3	1	2	3
TOTAL	97	19	20	13	149	63	40	29	31	312	7	6	28	18	16	49	1	11	11	2	6	9	2	9	21	1	10	25	33	26	6	15

and chiefly under 1 month of age. The causes of death mainly responsible for the increase were developmental conditions, intestinal diseases and certain infectious diseases.

Though the records on the whole are comparatively satisfactory, some half of the deaths must be regarded as coming within the category "preventable," and efforts should be made in the direction of reducing this death rate by all means in our power.

ILLEGITIMATE INFANTILE MORTALITY.

The following Table is continued as it shows how regularly the illegitimate death rate approximates to double the legitimate death rate.

TABLE XI.

LEGITIMATE AND ILLEGITIMATE INFANTILE MORTALITY.

	URBAN DISTRICTS		RURAL DISTRICTS		COUNTY	
	Leg.	Illeg.	Leg.	Illeg.	Leg.	Illeg.
1906	86	264	70	216	75	235
1907	94	141	73	161	79	152
1908	97	101	73	127	80	116
1909	97	223	75	169	82	191
1910	84	119	69	106	74	112
Average 1906-1910	87	152	64	124	71	135
1911	104	180	91	133	95	152
1912	69	112.5	73	93	71	100
1913	82	220	66	99	70	143

(Certain districts have been omitted from the above Table, as the information is not available. The figures for 1912 and 1913 are complete).

Though the average number of illegitimate infants dying each year is only about 36, yet the saving that might and ought to be effected (including legitimate children), should be something like 200 lives a year.

NOTIFIABLE DISEASES.

The statistical summary of notifiable disease issued by the Local Government Board shows that there was a very considerable increase in the prevalence of scarlet fever in this County, and a slightly decreased incidence of diphtheria and puerperal fever. The attack-rate of scarlet fever per 1,000 of the population increased from 2.32 in 1912 to 3.97 in 1913, and this disease was more prevalent in this County than in the Country as a whole and in either of the neighbouring Counties. Though there was a decline in the incidence of diphtheria, and the rate was below that for England and Wales, it was above those for the neighbouring Counties. The rates for typhoid fever and puerperal fever were below those for the Country generally and the surrounding Counties, with the exception of Herefordshire and Shropshire for typhoid fever, and Worcestershire for puerperal fever.

Details of the distribution of notified cases in 1913 will be found in Tables XII. (A) and (B) and average fatality for various diseases in the following Table XIII.:—

TABLE XII. (A)—URBAN DISTRICTS.

1913.

L.G.B. TABLE II.—NOTIFIABLE INFECTIOUS DISEASE.

DISEASE	At all ages	AT AGES—YEARS.							Total cases removed to Hospital	Ayre	Charlton Kings	Cheltenham	Cirencester	Coleford	Kingswood	Nailsworth	Newnham	Stow-on-the-Wold	Stroud	Tetbury	Tewkesbury	Westbury-on-Severn
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards														
Cases removed to Hospital	...	...	...	...	...	...	...	...	...	...	9	346	19	...	10	8	2	...	44	...	2	...
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	150	...	22	102	16	8	2	...	45	...	3	49	16	2	62	2	...	1	15	...	...	...
Erysipelas	57	...	3	8	5	15	20	6	1	...	...	45	2	...	5	...	1	...	3	1	...	...
Scarlet Fever	490	3	98	322	41	24	2	...	385	...	7	335	20	1	62	8	6	14	32	...	2	3
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	14	...	...	1	4	4	5	...	8	...	...	11	...	...	1	1	...	...	...	...	1	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	5	...	...	...	...	5	...	...	1	...	...	3	...	1	1	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Polio-Myelitis	4	...	3	1	...	...	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	239	...	2	25	71	114	24	3	...	1	4	135	9	1	32	7	2	3	27	4	9	5
Other forms of Tuberculosis	47	...	1	13	17	10	5	1	...	1	1	25	4	1	6	1	1	...	6	...	...	1
TOTALS	1006	3	129	472	154	180	58	10	440	2	15	607	51	6	169	19	10	18	83	5	12	9

Cheltenham Borough—Pulmonary Tuberculosis cases removed to Hospital, 18; other forms of Tuberculosis, 4.
 Newnham U.D.—" " " " 2; " " " 1.
 Tewkesbury Borough—" " " " 2; " " " —

1913.

L.G.B. TABLE II.—NOTIFIABLE INFECTIOUS DISEASE.

DISEASE.	At all ages	AT AGES—YEARS							Total cases removed to Hospital	Camden	Cheltenham	Chipping Sodbury	Cirencester	Dursley	East Dean	Faringdon (part of)	Gloucester	Lydney	Marston Sicca	Newent (part of)	Northleach	Pebworth	Slow-on-the-Wold (part of)	Stroud	Tetbury (part of)	Tewkesbury (part of)	Thornbury	Warmley	West Dean	Wheatenurst	Winchcombe (part of)
		Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards																							
Cases removed to Hospital	...	...	...	...	...	...	...	...	...	...	13	18	33	5	109	...	9	47	12	...	3	6	...	107	...	8	...	39	...	...	24
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	243	1	33	163	28	14	3	1	80	13	4	34	14	15	9	...	42	5	2	1	...	2	5	29	1	...	26	22	12	3	4
Erysipelas	97	3	...	4	9	25	33	23	...	3	1	13	2	3	7	...	10	6	...	4	3	...	2	7	4	1	12	13	2	...	4
Scarlet Fever	811	4	150	553	76	27	1	...	353	10	18	87	29	9	156	...	46	60	10	13	3	7	28	90	7	9	19	81	92	17	20
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	21	...	1	3	5	9	3	...	...	1	2	2	...	...	1	...	12	...	...	...	...	1	...	...	...	1	...	...	...	1	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	3	...	...	...	...	3	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-Spinal Meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Polio-Myelitis	3	...	2	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Pulmonary Tuberculosis	356	1	3	49	111	141	46	5	...	7	11	30	17	12	27	1	6	4	1	7	7	6	6	82	5	5	36	43	29	9	5
Other forms of Tuberculosis	97	1	5	35	29	18	6	3	...	6	1	19	2	8	5	...	1	...	...	6	3	...	1	13	1	2	14	12	2	1	...
TOTALS	1631	10	194	808	258	237	92	32	433	42	37	186	64	47	206	1	118	75	13	31	16	15	43	221	18	17	108	171	137	31	34

TABLE XIII.

Average Fatality (deaths per 100 cases) of Scarlet Fever, Diphtheria and Typhoid Fever.

	Scarlet Fever			Diphtheria			Typhoid Fever		
	Urban	Rural	County	Urban	Rural	County	Urban	Rural	County
1899-1901	2.44	1.71	1.90	10.25	13.70	12.5	16.32	18.75	17.5
1902-1904	1.72	1.85	1.81	10.80	9.60	10.0	19.05	11.69	14.1
1905-1907	.65	1.5	1.26	11.99	7.70	8.46	17.57	10.74	13.3
1908-1910	.40	1.22	1.08	6.10	10.65	9.25	25.72	13.16	19.18
1911-1913	.92	1.14	1.07	5.92	6.83	6.57	11.90	11.60	11.77

It is gratifying to note the general steady fall in the fatality from these diseases.

SMALL-POX.

No case occurred in the County in either 1912 or 1913, though one child was notified on suspicion in the former year.

The introduction of cases into the County from time to time has caused considerable anxiety lest the disease should spread seriously; but, fortunately, all outbreaks since 1896 have been fairly localised.

NON-VACCINATED SCHOOL CHILDREN.

	Entrants		Leavers		Total
1909	...	33.1	...	33.0	30.7
1910	...	28.2	...	32.5	30.0
1911	...	28.6	...	34.25	30.8
1912	...	34.1	...	26.7	30.9
1913	...	38.6	...	28.4	34.7

On the other hand the above records of medical inspection bring home the fact that an increasingly large proportion of children is not receiving the protection that can be given by vaccination, and as the susceptible material increases, the greater becomes the danger of a general outbreak. The position is all the more serious because of the lack of accommodation *immediately available* for cases of small-pox in so many districts in the County. The following extract from Deputy Surgeon-General Andrews' report illustrates both these points, and whether or not his suggestion as to portable hospitals is practicable, there certainly would be advantages in having one permanent centre:—

“The danger of a severe epidemic of Small-pox is one against which we must always be on our guard, and, in common with many others, I am of opinion that this danger could best be met by the Central Authority having in readiness portable hospitals, thoroughly equipped and manned, which could, on what might be termed mobilisation, proceed at once to the affected area. If ever Small-pox occurs in our midst we shall find ourselves in a far more dangerous condition than was the case in 1896.

“Sir Ronald Ross, whose experience with the stamping out of Malaria is almost unique, has very recently pointed out how a certain number of immunised persons in a community serves as a protection to the non-immunised, and that, in order to experience what he very aptly describes as the ‘flare phenomenon,’ the proportion of immunised to non-immunised must be reduced to a certain critical point. Owing to the large number of un-vaccinated persons, a consequence of the exemption clause of the Vaccination Act, 1898, we are fast approaching, if we have not already reached, this critical point, when the ‘flare phenomena’ will become possible. In 1896 vaccination and re-vaccination were the rule rather than the exception, and in that year, when small-pox broke out in Gloucester, both vaccination and re-vaccination were actively carried out, and it was found that in those parishes where these precautions were most thoroughly taken, Small-pox failed to gain a foothold; but at the present time when the conditions are

so different, one cannot but be afraid when one thinks of the terrible mortality that must occur should Small-pox be introduced. To say that our improved sanitation will prevent the spread of infection is to adopt a pharisaical attitude and shut our eyes to the overcrowding and large number of susceptible persons living in close proximity to one another, a combination of circumstances which cannot be regarded otherwise than as a real source of danger."

SCARLET FEVER.

TABLE XIV.

	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904
Cases	1301	770	927	735	677	532	935	584	A 548	936
Deaths	13	7	12	7	6	6	14	9	3	17
Hospital Cases .. .	738	413	313	309	315	232	247	206	221	345
Case Fatality .. .	1.0	.91	1.29	1.22	.89	1.13	1.50	1.54	.55	1.82
Death-rate per 1000 ..	.04	.02	.01	.03	.02	.02	.04	.03	.01	.05
England and Wales: Death-rate per 1000		.05	.05	.06	.09	.08	.09	.10	.11	.11

A Excluding Chipping Sodbury Rural District.

The excessive prevalence of scarlet fever during 1913, to which reference has already been made, appears to have been fairly general over the whole County though various areas were comparatively free, more particularly in the north and east of the County and a small part near the centre. That the last area should have been comparatively immune is probably explained by the fact that two years previously the prevalence of the disease there had reached its maximum intensity since 1896. This explanation, however, does not hold good for the other areas in question, and it is somewhat remarkable that with a record prevalence in the town of Cheltenham the contiguous and surrounding

districts of Charlton Kings (7 cases) and Cheltenham Rural District (18) should have escaped so lightly.

The opinion generally expressed in these and previous Reports is that the spread of the disease is influenced very largely by the mildness of the type of the disease and the consequent difficulty of parents in appreciating the occurrence of cases amongst their children. Dr. Garrett's report contains most interesting observations on this matter. After referring to the facts that the relative number of susceptible persons was practically the same in 1907, when only 30 cases occurred, as in 1913 when 335 cases were notified, and that there had been no change in the preventive measures which no doubt lessen the number of cases, he concludes—

“The cause of scarlet fever is therefore a variable as well as a powerful influence. From time to time it assumes a vitality and infectiveness which it does not possess at another time, and by virtue of this produces a greater number of cases. Supposing, as is probable if not absolutely proven, that the disease is due to a microbe, then that microbe varies in its power of producing the disease, and in its extent of existence considered numerically. In this it is in no way peculiar, as many analogies can be called to mind in the recurring prevalence of other diseases both of men and animals and plants, and in some of these the seasonal increase of parasitic life, which causes the disease, and its determined vitality and power at such times, are evident beyond question.”

The average fatality from scarlet fever fell from 1.90 deaths per 100 cases in 1899-1901 to 1.08 in 1908-10 and 1.07 in 1911-13. It is interesting to note that with the exception of the first triennial period the fatality has been greater in Rural than in Urban Districts.

DIPHTHERIA.

TABLE XV.

	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904
Cases	393	406	418	551	401	486	648	504	A 632	282
Deaths	30	29	20	37	39	57	70	42	39	25
Hospital Cases	125	110	113	254	106	171	191	167	80	46
Case Fatality	7.63	7.14	4.78	6.71	9.7	11.7	10.8	8.33	6.17	8.87
Death-rate per 1000	.09	.09	.06	.11	.11	.17	.21	.13	.13	.08
England and Wales: Death-rate per 1000		.12	.13	.12	.14	.16	.16	.18	.16	.17

A Excluding Chipping Sodbury Rural District.

In contrast to the unusual prevalence of scarlet fever, the number of cases of diphtheria was slightly less than in 1912 or 1911, even though there was a greatly increased incidence of the disease in Cheltenham and Kingswood and in the Gloucester Rural District, which together account for 157 of the total 393 cases. The Reports of recent years bear evidence that the importance of the personal factor in the spread of diphtheria is increasingly appreciated, and in the present series are records of very useful work undertaken in searches for possible sources of infection, children, who either have not been ill or have had only slight symptoms, and who are harbouring the infective organism. Thus, at Kingswood some 622 swabs were taken by Dr. Perrott and Dr. Hancock and 164 carriers found, including 20 nasal and 2 aural cases; at Quinton 21 swabs were taken by Dr. Findlay and Dr. Blake and 3 suspects discovered; at Frampton Cotterell over 200 swabs were taken and 4 cases and several suspicious forms were found,

and at Olveston 14 bacteriological cases were found by Dr. Rhind; and at Uplands and Randwick many carriers were similarly found by Dr. Green. When such carriers have been discovered the problem is to deal with them. In this connection Dr. Rhind's observations are of special interest: he says—

“The importance of detecting these carriers is obvious, especially in connection with schools, which are undoubtedly the breeding ground for diphtheria. The great difficulty with these carriers is how to get them treated, so that they may not remain infectious for long periods; they are not suffering from the disease diphtheria any more than a person who has the germ of pneumonia in his or her mouth is suffering from the disease pneumonia; again parents rightly say that they cannot afford to pay for a doctor when their child is obviously not ill; also it is not right that these people should be placed in an isolation hospital without some special reason. It is quite probable that the virulence of the bacillus gradually lessens in each individual carrier, but may regain its former virulence when transferred to new soil (another person); so that we may consider those carriers in actual contact with definite cases of diphtheria as the dangerous ones, and to be carefully looked after and treated; not only as a protection to others, but to possibly prevent the disease developing in themselves.”

Dr. Rhind to a certain extent supplies the answer to his own enquiry by the work he initiated at Olveston where the noses and throats of affected children were sprayed daily by the District Nurse, and by his suggestion that he should be empowered in similar cases to supply on loan a glass and metal spray whenever he thinks it expedient to do so. At Kingswood a temporary dispensary was opened for 9 or 10 weeks and all infected children were treated by a Nurse acting under Dr. Perrott's direction, the maximum attendance being 164. At Stroud the children were treated at the Isolation Hospital as out-patients.

As will be seen from Table XIII. the average fatality from this disease has fallen very steadily from 12.5 deaths per 100 cases in 1899-1901 to 6.57 in 1911-13, a saving of nearly 50 per cent. of children in the 14 years.

TYPHOID FEVER.

TABLE XVI.

	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904
Cases	35	28	90	26	53	67	63	79	A 53	50
Deaths	9	1	8	10	7	11	6	9	11	10
Hospital Cases	8	6	41	8	25	24	23	34	12	6
Case Fatality	25.7	3.57	8.89	37.0	13.2	16.4	9.5	11.4	20.75	20.0
Death-rate per 1000	.03	.003	.02	.03	.03	.03	.02	.03	.04	.03
England and Wales: Death-rate per 1000		.04	.07	.05	.06	.075	.07	.09	.09	.09

A Excluding Chipping Sodbury Rural District.

The number of cases (35) was higher than in 1912 (28) but below that in any previous year except 1910—a cold and wet year—when only 26 the record minimum were notified. On the whole the history of this disease in the past 19 years gives the most striking evidence of the result of sanitary works in that there has been steady decline in the occurrence of typhoid fever, which in the early half of this period was twice as prevalent as in the later half, in spite of localised outbreaks in the second period. The only districts in which more than two cases occurred during 1913 were Cheltenham Borough (11) and Gloucester Rural District (12). Of the 12 cases in the Gloucester District, 8 occurred in the County Asylum and the remain-

ing 4 in houses near the Severn, the water from which was used by the patients for drinking.

The number of deaths (9) was larger than in either of the previous two years and the case fatality (25.7%) was higher than in any year of which I have records except 1910 (37.0%) and 1897 (27.0%). As in 1910 there is practically no information to be gained as to the cause of the increased fatality but deaths occurred in two districts (Cirencester Urban and Dursley Rural) in which no cases were notified; had these been notified the total number of cases would have been 37 and the case fatality 24.3%. The average fatality as will be seen from Table XIII. has fallen from 17.5 in 1899-1901 to 11.8 in 1911-13.

PUERPERAL FEVER.

The number of cases of puerperal fever continues to fall in a gratifying manner, a minimum of 8 being notified during 1913, and it is to be hoped that the reduction from an average of 18 cases per year for the seven years prior to 1902, to an average of 12 in the past seven years may be taken as evidence that the Midwives Act, 1902, has effected good results.

There were two deaths among the notified cases and two further deaths occurred of persons who were not notified, making a total of four. The average annual number of deaths in the 11 years (1902-12) was 8.

CEREBRO-SPINAL MENINGITIS.

No cases were notified.

ACUTE POLIO-MYELITIS.

Four cases were notified in Cheltenham, 2 in Campden Rural District and 1 in Winchcombe Rural District. As regards the Campden cases Dr. Findlay says, the only thing he could find in common was that both children had access to poultry in pens. Dr. Garrett gives a full account of the outbreak in Cheltenham and then concludes:—

“The lessons learnt in an experience of this frightful disease, which was happily as limited as above represented, seem to be firstly, that its epidemic nature fully justifies its addition to the list of notifiable infectious diseases. The limitation of the disease for the main part to one quarter of the town, several cases, as ultimately discovered, neighbouring each other quite closely, indicates that contiguity plays a part in the spread of the disease, which however, seems to be more selective than most infectious diseases, and to be spread with greater difficulty whether as the result of a pretty general power of defence in the bodies of the children, or the fact of the infection not being readily disseminated from the body of the sufferer in a direct way, in that respect resembling typhoid fever. It certainly appears that notwithstanding that it did get a hold of several children within a limited area and time, the disease subsided of its own accord. Heaven grant that it may not have left a remnant spark of infection to recrudescence. It appears somewhat astonishing that the tendency to epidemicity, and the evidently infectious nature of this dreadful disease should for so long have escaped notice. From time to time we have known of its presence, and have been made aware by the evidence of its effect among our population of its periodic recurrence. By its notification there will be henceforward chances for its closer study, with the hope of being able to interpose some sort of prevention to save humanity from its dire effects. It cannot be pretended that at present so desirable a power is available, for whilst the actual cause of the disease may be shown to be microbic, the control of the cause seems at present to be exceptionally difficult. Is it necessary to isolate such cases and for how long? Should we cease to permit them to go to general hospitals as they have always done hitherto? Is any good done by disinfecting clothing and houses? Is any treatment possible for the prevention of the disease or to alleviate its effects on the

lines of Pasteur's treatment for hydrophobia, or otherwise? Where does the germ of the disease find its natural habitat and what is the precise reason of its coming and going? These are questions which arise in sight of the infliction upon human creatures of such pitiable results as those which follow the stroke of polio-myelitis.

"The fact of half the cases of the outbreak here last year being at first neglected and overlooked, clearly demonstrates the necessity of a careful enquiry in the neighbourhood whenever a case of polio-myelitis is notified, with a notice to the doctors residing near to apprise them of the chance of other cases occurring and so to assist them to make an early diagnosis, though what may be the successful treatment at the onset of the disease to prevent the after permanent paralysis may as yet be undetermined."

OPHTHALMIA NEONATORUM.

This disease was made compulsorily notifiable by Medical Practitioners and Certified Midwives from the 1st April, 1914, under an Order of the Local Government Board issued on 5th February, 1914. As mentioned in my previous Reports, it would appear from the information obtained in connection with the working of the Midwives Act, 1902, that the cases reported will be few in number: in the four years 1909-12 medical help for discharge from the baby's eyes was sought on a total of only 18 occasions, but during 1913 there was a considerable rise to 10 in the one year. On the other hand, it is estimated that approximately one-third of the inmates of schools for the blind are suffering from neglect of proper attention to discharge from their eyes in infancy. It is therefore of very great importance that all cases should receive careful and efficient treatment and, if benefit is to result from notification, arrangements are necessary to ensure that this treatment is given. When the

TABLE XVII.
TUBERCULOSIS.

DISTRICTS.	PULMONARY TUBERCULOSIS.							OTHER FORMS OF TUBERCULOSIS.		
	Total Deaths, 1901-10.	Average Annual Death Rate.	Existing Cases on an average duration of 3 years.	Notifications		Admissions to Sanatorium.		Total Deaths, 1901-10.	Average Annual Death Rate.	Notifications, 1913
				1912	1913	1912	1913			
URBAN—										
Awre	10	·92	3	...	1	...	...	3	·28	1
Charlton Kings	46	1·11	14	6	4	...	4	13	·31	1
Cheltenham	424	·86	127	103	135	7	13	228	·46	25
Cirencester	73	·96	22	10	9	...	1	33	·43	4
Coleford	26	1·01	8	4	1	2	5	6	·23	1
Kingswood	120	·97	36	44	32	1	9	40	·32	6
Nailsworth	24	·79	7	2	7	1	3	2	·07	1
Newnham	7	·63	2	1	2	...	1	1	·09	1
Stow-on-the-Wold	18	1·33	5	...	3	...	...	11	·81	...
Stroud	129	1·44	39	13	27	2	4	24	·27	6
Tetbury	30	1·60	9	4	4	...	1	10	·53	...
Tewkesbury	68	1·27	20	6	9	...	2	42	·78	...
Westbury-on-Severn	21	1·14	6	5	5	...	...	7	·38	1
Total Urban Districts ...	996	·99	298	198	239	13	43	420	·42	47
RURAL—										
Campden	46	·83	14	8	7	...	4	17	·31	6
Cheltenham	28	·57	8	13	11	1	9	14	·28	1
Chipping Sodbury	139	·64	42	19	30	...	5	53	·25	19
Cirencester	85	·68	26	14	17	...	1	32	·26	2
Dursley	93	·78	28	20	12	...	6	25	·21	8
East Dean and United Parishes ...	143	·72	43	33	27	2	9	67	·34	5
Faringdon (part of)	6	·51	2	1	1	...	...	2	·17	...
Gloucester	78	·67	23	20	6	4	4	27	·23	1
Lydney	62	·70	19	11	4	1	1	19	·22	...
Marston Sicca	13	·84	4	1	1	...	...	4	·26	...
Newent (part of)	44	·43	13	8	7	...	3	13	·19	7
Northleach	57	·71	17	5	7	1	1	13	·16	3
Pebworth	13	·42	4	5	6	...	...	10	·32	...
Stow-on-the-Wold (part of) ...	48	·72	14	10	6	2	...	17	·26	1
Stroud	312	1·12	94	65	82	5	36	57	·20	13
Tetbury (part of)	18	·47	5	7	5	...	2	8	·21	1
Tewkesbury (part of)	33	·66	10	6	5	...	...	9	·18	2
Thornbury	169	·90	51	35	36	...	10	67	·36	14
Warmley	169	1·02	51	52	43	1	17	46	·28	12
West Dean	96	·74	29	26	29	2	2	32	·25	2
Wheatenhurst	57	·93	17	4	9	...	1	8	·13	1
Winchcombe (part of)	81	·89	24	9	5	...	...	37	·41	...
Total Rural Districts ...	1790	·80	538	372	356	19	111	577	·26	98
Administrative County	2786	·86	836	570	595	32	154	997	·31	145

disease was added in 1912 to the schedule of diseases notifiable in the Campden Rural District, the Medical Officer of Health was authorised to engage a nurse or take such other steps as he thought necessary to deal satisfactorily with any case notified; this course has much to commend it and is one which might with advantage be adopted in other districts.

TUBERCULOSIS.

As mentioned in my last Report, the arrangements for the notification of all cases of tuberculosis were completed by the issue of the Public Health (Tuberculosis) Regulations, 1912, and the records for that year together with those for 1913 should give fairly complete information as to the cases existing in the various districts in the County; they will prove to be not quite complete, inasmuch as some of the cases were notified prior to 1912, and did not come under review in either year, and as, when the organisation of the County scheme is fully effective, cases which would not come under observation under present conditions will in future be detected in the systematic search for early symptoms. The accompanying Table XVII. gives the estimated number of cases of pulmonary tuberculosis existing in each district on the basis that the average duration of the disease in recognisable form is three years, and also the actual numbers of notifications in 1912 and 1913; some of those already notified have probably died, whilst other cases have been notified on two or more occasions, and, therefore, are counted as many times. The correction to be made to

ascertain the actual number of patients, some of whom have been notified two or more times, is indicated by the fact that the number of notifications between 1st February, 1913, and 3rd January, 1914, was 855, whereas the number of cases (pulmonary) to which they related was 625, *i.e.*, on the average rather more than four notifications were received for every three cases.

It would appear that in some districts the cases notified considerably exceed the estimated number of patients, while in others the reverse is the case.

The actual numbers of cases on the register at the end of 1913 were :—

TUBERCULOSIS.						
		Pulmonary		Other Forms		Total
Males	...	345	...	61	...	406
Females	...	280	...	84	...	364
		625		145		770

Records are kept of the ages and occupations of all patients, and it is proposed to summarise the particulars in a later report.

Mention was made in my last Report of the scheme of the Joint Committee for Tuberculosis, and of the opening of four dispensaries. The arrangements were further advanced during 1913, and, as finally approved by the Joint Committee on the 18th April, 1914, include :—

1. SANATORIUM—

65 beds at the Cranham Lodge Sanatorium.

2. HOSPITAL BEDS—

(a) Intermediate and advanced cases—76 beds.

These beds are not yet available, but negotiations are proceeding and it is hoped that 41 beds at five Isolation Hospitals will be ready for occupation this year.

(b) Surgical cases—

Negotiations are proceeding and one large General Hospital has agreed to take patients.

3. DISPENSARIES—

Eight of the nine dispensaries are now open. Some difficulty was experienced in discovering a suitable place in Cirencester, but it is expected that this, the ninth, dispensary will be started during the present month. The work done at the various dispensaries is described by Dr. Dickson, the Tuberculosis Officer.

4. SHELTERS—

60 shelters have been provided for suitable cases.

The present staff includes Dr. Dickson, the Tuberculosis Officer, and Dr. Alexander, Assistant Tuberculosis Officer, and three whole-time Nurses; the services of the District Nursing Associations at Cheltenham and Gloucester are utilized in their respective areas.

The co-operation of the Local Sanitary Authorities, on whose work success in the direction of prevention largely turns, has been sought, and, it is satisfactory to note, has been generally accorded throughout the County. The matters in which their assistance was specially desired were :—

1. Attention to defective housing conditions and the disinfection of houses where necessary ;
2. The supply of disinfectants, spitting flasks and cups, and paper handkerchiefs ;
3. The supervision of shelters and their removal ;
4. The provision of beds for suitable cases at Isolation Hospitals ;
5. If desired, to appoint the Tuberculosis Medical Officers as Assistant Medical Officers of Health, and the Dispensary Nurses as Assistant Sanitary Inspectors without salary.

The appointments suggested in the last paragraph have not been effected up to the present time, and our experience does not show that this proposal will prove to be necessary.

The following report of the work carried out in connection with the scheme, which is contributed by Dr. Dickson, shows that, while very much has been done to benefit the patients, there is considerable scope for the development of preventive measures, including a search for early cases before the development of serious symptoms, im-

provement in home conditions, and the removal of cases from unsuitable surroundings in which they are sources of danger and infection to other members of the household :—

DISPENSARIES.

Eight dispensaries are at present in use throughout the County. The work done at the dispensary consists in the examination of patients with tuberculosis to decide what treatment is appropriate for them ; selecting cases suitable for the Sanatorium ; examining Contacts ; acting as a Consulting Officer in doubtful cases sent by Medical men, and in providing treatment when necessary.

In connection with the Dispensary is undertaken the investigation of the home conditions of the patients who pass under review. This investigation reveals the magnitude of the problem which has to be solved, and the great and often urgent need there is for a better state of things as regards housing.

SHELTERS.

Sixty shelters are in use throughout the County, and are found to be a very useful adjunct to treatment. They are frequently asked for by patients who have been at the sanatorium, and who find on their return home that a more liberal supply of fresh air than is possible indoors has now become a necessity.

Supervision of these shelters is done by the visiting nurses, who try to ensure that a proper use is made of them.

It is very unfortunate that up to the present time no beds are available for advanced cases. This is a vital part of the scheme. Prevention is always better than cure, but especially so in Tuberculosis, where prevention is relatively easy, and cure notoriously difficult. In the work of prevention the isolation of patients with advanced disease plays an extremely important part. An effort has been made to use as many shelters as possible for the purpose of isolation. The method has drawbacks, but is certainly better than nothing, and has been helpful in many instances.

SANATORIUM.

Sixty-five beds have been authorized at Cranham Lodge Sanatorium. The results of treatment have been reasonably satisfactory, and will, I have no doubt, improve as time goes on, and patients are got at an earlier stage. It is evident that a very great deal must depend on the stage at which a case is brought to our notice, whether it can be dealt with hopefully or the reverse. It is certainly surprising at times to find for how long a person with Tuberculosis will continue at work without consulting a doctor at all—till the disease is quite advanced in some instances. But when the earliest cases, and patients who seem to the medical attendant to raise a suspicion of consumption, are referred to the dispensaries, the possibilities of permanent benefit are enormously heightened.

In the hands of the Medical men of the County to a large extent the issue lies. If the sanatorium is to hold

out any reasonable hope of cure, cases must be got *early*, and as the work of the department grows and justifies itself, so the opportunities of seeing patients at a suitable stage grow. I am glad to say that the practice of referring such cases is decidedly on the increase.

GENERAL.

The work of the department proceeds very smoothly. Its relations with the practitioners are excellent, and promise an increasing sphere of usefulness. The number of consultation cases is growing, and this is a hopeful feature. Correspondingly the work and responsibilities of the Tuberculosis Officers are multiplied. It is to patients of this type that the most prolonged and exhaustive examination must be given. It is easy to classify an individual with well-marked disease. It is a very anxious task to pronounce a verdict in a suspicious case. It is well to emphasize this, as the very considerable numbers reported on monthly as not requiring further action tend to be practically overlooked. But such examinations not only throw the greatest strain on the examining officer, but frequently act as a powerful factor in treatment. For patients whose condition is suggestive of phthisis often suffer from lassitude and depression, and a thorough overhauling and the assurance that they are not suffering from consumption gives a great impetus towards recovery of health.

The treatment undertaken at the dispensary consists in general medical measures; in the instructing of patients in

the mode of life they ought to follow out—an extremely important and insufficiently recognised line of treatment—and in the administration of tuberculin, a specific treatment suitable in selected cases.

As regards the visitation by nurses of cases in their own homes, this is found by experience to be essential. It is uphill work, and results are slow, but it is necessary to persevere with it. The education of people out of the habits of a lifetime cannot be accomplished in a day, or in a month or two's residence in a sanatorium. To those not familiar with the problem it is disconcerting to find how easily and quickly the simplest lessons in hygiene are forgotten or ignored, and it is in persistent following up that our hope must lie. Our nursing arrangements are not finally completed, but good work is being done and is already bearing fruit. This work also has an important bearing on the campaign for prevention, without which the efforts to cope with the disease are futile.

An important measure in the prevention of the spread of infection is the stopping of indiscriminate spitting, and on the 12th January, 1914, the County Council adopted the following Bye-law :—

No person shall spit on the floor, side or wall of any public carriage or of any public hall, public waiting-room or place of public entertainment, whether admission thereto be obtained upon payment or not.

NON-NOTIFIABLE DISEASES.

From the returns obtained from the schools it appears that there was a considerable increase in the prevalence of measles and chicken-pox, and that whooping cough and mumps were much less prevalent in 1913 than in either of the preceding years. The areas chiefly affected by measles were Tewkesbury Borough, and Chipping Sodbury, Dursley, East Dean, Warmley and Winchcombe Rural Districts; and by chicken-pox, Cirencester Urban and East Dean Rural Districts. Though the general prevalence of these two diseases was less, there were extensive localised outbreaks of chicken-pox in East Dean, and of mumps in Newent and Thornbury Rural Districts.

Dr. Garrett includes in his report on Cheltenham an account of an outbreak of *infectious sore throat*, due to a streptococcus, and followed in some cases by dangerous complications, which is of such general interest that it is here reproduced:—

“A disease quite distinct from Diphtheria, affecting primarily the throat, arose in the town last year, and was chiefly in evidence for about three months in the early part of the summer. Of this I should estimate the number of cases that occurred from first to last at about three hundred. It affected grown up persons rather than children, as very few cases indeed were heard of in the Elementary Schools even upon enquiry. A question addressed by letter to the leading medical practitioners elicited the fact that most of them had had cases of this complaint under treatment, some of them in sufficient numbers to lead to comment; in fact, my attention was drawn to the matter by one of them. Such an occurrence lends itself easily to exaggeration, and the importance of the presence of this disease became somewhat exaggerated, so that it got abroad that the town was badly affected by an epidemic. It happened about this time that

two deaths attributed to tonsillitis or septic sore throat took place in persons of advanced years, and this lent some speed to the rumour, which received an undesirable fillip, and led to questions being directed to me from various sources by a publication in one of the daily newspapers that boasts a very large circulation. This publication was too sensational, and was likely to be more damaging to the town than of advantage to any living person.

“Non-diphtheric infectious sore throat has always been of sufficiently common-place occurrence. How many sorts and sources of such throat affections exist no one can say, since the matter has not been worked out, but one might well expect several kinds to be capable of being distinguished from one another.

“The sore throat which occurred here last summer was associated with an easily demonstrable streptococcus contained in the muco-purulent secretion thrown out upon the tonsils and neighbouring inflamed mucous surfaces of the throat, and which appeared in some cases to be capable of setting up a general septicæmia. In the vastly greater proportion of patients so attacked the illness ensuing ran a course of a few days, and resulted in rapid and complete recovery, whilst a few were more severely affected with enlarged cervical glands that did not immediately resolve, and a few were made dangerously ill with signs of toxæmia and endocarditis. Two physicians of the town have detailed some of the worst cases seen, and the interesting accounts they have published in the *British Medical Journal* may be looked upon as a valuable contribution towards the required differentiation of the several kinds of sore throat that undoubtedly exist by the description of one such. They also seem to have established the desirability of carefully enquiring into the condition of the heart in all cases of sore throat.”

BACTERIOLOGICAL EXAMINATIONS.

The numbers of specimens examined at the University of Bristol, under their agreement with the County Council, during 1913 and previous years are given in the following Table:—

TABLE XVIII.

	1907	1908	1909	1910	1911	1912	1913
Diphtheria ...	556	458	804	3449	1747	1470	2445
Typhoid Fever	61	53	71	30	60	27	50
Tuberculosis ...	119	124	171	178	226	318	382
Total ...	736	635	1046	3657	2033	1815	2877

There was a considerable rise in the number examined last year, mainly corresponding, as usual, to an increase in the number of specimens examined for diphtheria; the increase occurred chiefly in the first quarter of the year, 1,389 specimens being then examined, when a special investigation was conducted in the Kingswood Urban District by the Medical Officer of Health and one of the School Medical Inspectors (Dr. Deborah Hancock), on account of the occurrence of numerous cases of diphtheria. The most noticeable further feature in the table is the steady rise in the number of specimens examined for tuberculosis, which increased from 100 in 1905 to 382 in 1913; it is probable that in connection with the scheme for the treatment of tuberculosis it will be desired to have frequent examinations made in order that the progress of patients in this respect may be observed. At the Sanatorium such examinations are now made by the Medical Superintendent and his assistants, and arrangements are being considered with a view to similar work being done by the Assistant Tuberculosis Officer. No specimens from suspected cases of

cerebro-spinal fever have yet been examined. The reports, as usual, contain evidence of the appreciation in which the opportunity for free examinations is held.

ISOLATION HOSPITALS.

In his Report to the Local Government Board of July, 1912 (page 6), Dr. Franklin Parsons observed:—"A town
"or district council which has not provided hospital accom-
"modation adequate and suitable for coping with cases
" (requiring removal) must be regarded as having failed in
"one of its obvious duties for the protection of the public
"health." It cannot, unfortunately, be said that this duty has been completely fulfilled throughout the County, and, indeed, there are several districts for which no accommodation has been provided, as will be seen from the following statement of the position of the various districts and from Tables XIX. (A) and (B).

Districts for which adequate accommodation has been provided:—

Charlton Kings Urban District.

Cheltenham Borough.

Cheltenham Rural District.

The hospital for general infectious diseases with about 90 beds for these districts is the Delancey Fever Hospital; the nucleus of the funds out of which the hospital was provided was a legacy of £4,100 from Miss Delancey in 1871 and donations from Mr. Gabell to the amount of about £10,000. Further gifts were made to the Trustees who have maintained the hospital out of subscriptions and fees for about 30 years. A scheme for the

TABLE XIX.
ISOLATION HOSPITAL ACCOMMODATION.

1913.

(A) URBAN DISTRICTS.

DISTRICT	GENERAL DISEASES		SMALL-POX		Disinfectors	GENERAL REMARKS.
	Situation	No. of Beds	Situation	No. of Beds		
Awre	Greenway	12	None	...	..	Jointly with Newnham and Westbury-on-Severn Urban and East Dean Rural Districts.
Charlton Kings ...	Delancey Hospital, Cheltenham	...	Delancey Hospital ...	...	Washington Lyons	Transference to Local Authorities awaiting decision of Charity Commissioners.
Cheltenham ...	Delancey Hospital ...	91	Delancey Hospital ...	9	..	Separate Isolation Hospital for Ladies' College on another site. Transference to Local Authorities awaiting decision of Charity Commissioners.
Cirencester "...	Cirencester	12	South Cerney	2 Cottages	Antiquated gas disinfectors	Joint Hospital with Cirencester Rural District. Accommodation unsatisfactory, and improved accommodation under consideration.
Coleford	None	...	None	...	...	Joint District constituted by County Council, 1901. Steam disinfectors wanted.
Kingswood	Mangotsfield	8	Fisher Lane	6	...	Iron and wood erected for Small-pox, 1904. Arrangements made with Warmley Rural District Council for eight beds. Steam disinfectors absolutely essential.
Nailsworth	Cainscross (joint) ...	44	Bisley (joint)	12	Goddard, Massey and Warner's, steam	Joint Hospital with Stroud Urban and Rural Districts.
Newnham	Greenway	12	None	..	...	Jointly with Awre and Westbury-on-Severn Urban Districts and East Dean Rural District.
Stow-on-the-Wold ...	None	...	Tents only	...	...	Tent for Small-pox, jointly with Stow Rural District. Hospital wanted, and combination with other districts suggested.
Stroud	Cainscross (joint) ...	44	Bisley (joint)	12	Goddard, Massey and Warner's, steam	Joint Hospital with Nailsworth Urban and Stroud Rural Districts.
Tetbury	None	...	None	...	...	
Tewkesbury	Tredington	...	None	...	Thresh	Joint Hospital with Tewkesbury Rural District opened. Small-pox Hospital needed.
Westbury-on-Severn	Greenway... ..	12	None	...	..	Jointly with Awre and Newnham Urban Districts and East Dean Rural District.

TABLE XIX.
ISOLATION HOSPITAL ACCOMMODATION
1913.

(B) RURAL DISTRICTS.

DISTRICT	GENERAL DISEASES.		SMALL-POX		Disinfectors	GENERAL REMARKS
	Situation.	No. of Beds	Situation	No. of Beds		
Campden	None	...	None	...	None ...	Hospital tents for Small-pox stored at Moreton-in-the-Marsh. Arrangements should be made for Joint Hospital with other districts.
Cheltenham	Arrangement with Delancey Hospital	...	...	...	None ...	Bulky articles disinfected by Cheltenham Corporation.
Chipping Sodbury	Chipping Sodbury Common	8	None	...	None ...	Increased accommodation, ambulance and telephone needed.
Cirencester	Cirencester	12	South Cerney ...	2 Cottages	Gas, antiquated ...	Joint Hospital with Cirencester Urban District. Tents used for Scarlet Fever. Improved accommodation under consideration.
Dursley	The Moors, Coaley	4	None	...	None ...	Land for Hospital bought at Breakhearts Hill, North Nibley, 1901, but no water supply and nothing done. The Moors is not suitable for two diseases at the same time.
East Dean and United Parishes	Green Bottom, Littledean ...	12	None	...	...	Awre, Newnham and Westbury-on-Severn Urban Districts combined with East Dean Rural District.
Faringdon	2 Berthon Huts	10	None	...	None ...	Not suitable for general use, and not used 1913. Some cases sent to Abingdon. Disinfection is done at Swindon and District Hospital.
Gloucester	Arrangement with Gloucester City Hospital (Highnam)	...	Longford	...	...	Arrangement was satisfactory in 1913.
Lydney	Alvington	12	None	...	...	Some improvements made and ambulance bought. Water carted from Lydney mains.
Marston Sicca	Stratford-on-Avon (joint) ...	20	Belle Vue (iron) ...	...	Washington Lyons	
Newent	Oxenhall	7	None	...	...	Temporary building totally unfit. Few cases taken by City; none in 1913.
Northleach	Near Northleach	12	Northleach	...	...	Disinfectors wanted.
Pebworth	Evesham (joint)	24	Haselor	...	Recks ...	
Stow-on-the-Wold	None	...	Tents only	...	...	Tent for Small-pox jointly with Urban District. New tents bought, 1911
Stroud	Cainscross (joint)	44	Bisley (iron)	12	Goddard, Massey ... and Warner	Joint Hospital with Nailsworth and Stroud Urban Districts.
Tetbury	None	...	None	...	...	Combination with Cirencester suggested.
Tewkesbury	Tredington	12	Tent only	...	Thresh ...	Joint Hospital with Tewkesbury Borough and Hospital opened. No Small-pox Hospital. (Tent only).
Thornbury	None	...	Milbury Heath	...	...	Three navvies' huts bought and erected 1909, and put in order 1913. Disinfectors required.
Warmley	Manor House, Mangotsfield ...	18	None	...	Manlove and Allott's	
West Dean	None	...	None	...	...	Joint District constituted by County Council, 1901.
Wheatenhurst	None	...	Eastington W.H. ...	8	...	Has an arrangement with the Stroud Joint Hospital Board for three guineas per case per week. No sufficiently urgent case, 1913.
Winchcombe	Langley Hill	4	None	...	...	Used for Small-pox, 1904.

transfer to the Local Sanitary Authorities is now under the consideration of the Charity Commissioners.

There is also a block for small-pox with 9 beds.

Nailsworth Urban.

Stroud Urban.

Stroud Rural.

A fully equipped hospital with 44 beds was provided for general infectious diseases at Cainscross at the end of 1904, and there is also an iron and wood hospital for small-pox with 12 beds at Bisley, provided in 1896.

Tewkesbury Borough.

Tewkesbury Rural District.

A fully equipped joint hospital of 22 beds was completed during 1913 for general infectious diseases.

There is no hospital for small-pox but a tent can be erected.

Marston Sicca Rural District.

This district is included in the Stratford-on-Avon Joint Hospital District with hospitals in Warwickshire.

Pebworth Rural District.

This district is included in the Evesham Joint Hospital District with hospitals in Worcestershire.

Districts for which accommodation has been provided but which is inadequate in one or more respects:—

Awre Urban District.

Newnham Urban District.

Westbury Urban District.

East Dean Rural District.

Arrangements were made in 1911 under a Provisional Order of the Local Government Board for the joint use of the iron and wood hospital at Green Bottom, with accommodation on the basis of the requirements of the Board for about 12 patients. It is suitable for cases of only one disease at a time, but alterations are under consideration.

There is no hospital for small-pox.

Cirencester Urban District.

Cirencester Rural District.

The two Councils entered into a voluntary combination in 1878, and opened a dwelling-house at Chesterton as the first Isolation Hospital in the County, with the exception of the Delancey Hospital. It has been altered and improved from time to time but is not suitable for cases of more than one disease at the same time. A tent was used for cases of scarlet fever during 1913, and alterations are under consideration.

Two cottages, adapted as one, on the road to South Cerney are rented for small-pox.

Chipping Sodbury Rural District.

The Council leased two cottages on Sodbury Common in 1896, and in 1903 bought a railway contractor's office and erected it adjoining the cottage. Various improvements have been made from time to time. The accommodation is not suitable for the isolation of two diseases at the same time, and there is no provision for small-pox.

Dursley Rural District.

A house at Cam Long Down is rented and has been improved from time to time; it is not suitable for cases of two diseases at the same time, and there is no accommodation for small-pox.

Lydney Rural District.

An iron and wood building was erected at Alvington on a site of 3 or 4 acres in 1896, and a brick block was built for the Nurse in 1905. It is not suitable for the isolation of two diseases at the same time, and there is no small-pox hospital.

Northleach Rural District.

An iron and wood hospital was provided in 1897 by Lord Eldon, on a site of about $2\frac{3}{4}$ acres. It is not suitable for the isolation of two diseases at the same time. A small brick building of 2 rooms, opening out of one another, was erected by the District Council on the same site, at a cost of about £92 in 1902, to accommodate cases of small-pox.

Thornbury Rural District.

There is no hospital for general infectious diseases. In 1899, the District Council purchased a site of about 2 acres on Milbury Heath, and ten years later erected three contractors' huts of wood, roofed with tiles; a well was then sunk (the supply from which is described as very precarious), drainage put in and various internal improvements made. This accommodation is, I understand, intended for small-pox, but it has not been used up to the present time.

Warmley Rural District.

The Council purchased the Mangotsfield Manor House in 1912 and adapted it for use as an Isolation Hospital, including additions for disinfector, ambulance shed and mortuary. It is not suitable for more than one disease at the same time.

It appears from the Report on the Kingswood Urban District, that during 1913 arrangements were made whereby the small-pox hospital for this district would be made available for any cases from the Rural District.

Winchcombe Rural District.

When cases of small-pox occurred towards the end of 1904 the Council erected an iron and wood building, at a cost of about £275, on Langley Hill, and now use it for other cases of infectious disease. It is not suitable for two diseases at the same time.

There is no other hospital for small-pox.

Districts in which arrangements have been made for the removal of cases into Hospitals in other districts:—

Kingswood Urban District.

During 1913, arrangements were made for the use of a minimum of 8 beds in the hospital of the Warmley Rural Council.

There is an iron and wood building at Fisher Lane for cases of small-pox.

Faringdon Rural District (Gloucestershire Parish of Lechlade).

Arrangements have been made for the removal of cases by motor ambulance to the Abingdon Isolation Hospital. The Council also possess 2 Berthon huts.

No special arrangement appears to have been made for small-pox.

Gloucester Rural District.

Under an agreement with the Gloucester Corporation cases are admitted into the City Hospital.

Newent Rural District.

Cases may be moved by special arrangements to the City Hospital, but no information is available that any cases have been taken to the hospital up to the present time.

There is a wooden building at Oxenhall, provided in 1894 for cases of small-pox, but this has been described by the Medical Officer of Health as unsuitable to receive cases.

Wheatenhurst Rural District.

There is an arrangement with the Stroud Joint Hospital Board for the reception of cases at a fee of 3 guineas per week for each case. In 1909, 13 cases out of 52 were removed, 3 cases in 1910, and 1 each in 1911 and 1912; it is said that no one of 20 cases of scarlet fever and diphtheria in 1913 was sufficiently urgent for removal to be necessary.

The only accommodation for small-pox cases appears to be a small wooden building adjoining the workhouse, but it can scarcely be said to be suitable for the purpose.

Districts in which the only provision consists of Tents:—

Stow-on-the-Wold Urban and Rural Districts.

• Campden Rural District.

The two former District Councils jointly possess hospital tents which were used for cases of small-pox in the Rural District in 1911, and in the third—Campden Rural District—2 tents are available for the same purpose. In no one of the three districts is there any provision for general infectious diseases.

Districts in which there is no special accommodation of any kind:—

Coleford Urban District.

Tetbury Urban District.

Tetbury Rural District.

West Dean Rural District.

Coleford Urban and West Dean Rural Districts have been formed a Joint Hospital District under an Order of the County Council, to which effect has not yet been given in the absence of a satisfactory supply of water, which, however, it is hoped will be provided in the near future.

There is, unfortunately, little information in the reports for 1913 as to the prospect of improving the resources of the County in the near future. The most important changes are the transfer of the Delancey Hospital (Cheltenham) to the Local Authorities, now before the Charity Commissioners, and the enlargement of the Tewkesbury Joint Isolation Hospital which was completed during 1913. Some improvement in the accommodation used in Cirencester as a Joint Hospital was under consideration, but, in view of the present unsatisfactory conditions, the cramped site and the expense that would necessarily be incurred in making the suggested alterations, there would appear to be good reasons for considering the matter more broadly.

The Councils of other districts which are not completely equipped should take the matter into consideration with the object of securing accommodation in as effective and economical a manner as possible. Combination of districts is very helpful, and, in view of the improved means of

locomotion, hospitals can conveniently serve much larger areas than was formerly practicable, and thereby the administrative expenses can be greatly reduced.

NURSES' EXCHANGE.

Greater advantage was taken during 1913 than in the preceding two years of the arrangement made by the County Council for the exchange of nurses, but the scheme has not been so successful as it was hoped it would be when it was initiated in 1906. The small measure of success that has been achieved is mainly due to the interest which has been taken in the scheme by Miss Mumford, the Matron of the Stroud Joint Hospital, who has worked it so far as this County is concerned and who has supplied by far the largest number of nurses on loan. In view of the small amount of support which has been forthcoming, the question of dropping the scheme has been seriously considered, but as the establishment of beds for tuberculosis at hospitals in the County may make a difference, it has been thought desirable to wait a little longer.

The numbers of calls for nurses and the numbers of nurses supplied in each year have been:—

			Calls		Nurses supplied	
1907	...	...	9	...	...	4
1908	...	...	11	...	...	3
1909	...	...	27	...	...	14
1910	...	...	47	...	..	6
1911	...	...	15	...	...	2
1912	...	..	1	...	...	0
1913	...	...	11	...	...	4

DISINFECTION.

Spraying appears to be gradually superseding fumigation in the disinfection of rooms, and, if properly done, is undoubtedly more effective.

Arrangements for the disinfection of bedding and other bulky articles by steam have been made for the following districts:—

Charlton Kings Urban, and Cheltenham Borough and Rural District—
at the Delancey Hospital and Borough Disinfecting Station.

Nailsworth Urban and Stroud Urban and Rural Districts—at the
Stroud Joint Isolation Hospital.

Faringdon Rural District—at the Swindon Isolation Hospital.

Marston Sieca Rural District—at the Stratford-on-Avon Joint Isolation Hospital.

Pebworth Rural District—at the Evesham Joint Isolation Hospital.

Warmley Rural District—at the Warmley Isolation Hospital.

The resources of the County in this respect were increased during 1913 by the provision of a Thresh Steam Disinfector at the Joint Hospital, for the use of the Tewkesbury Borough and Rural District.

There are still 25 districts with no effective appliance, without which the equipment for dealing with infectious disease cannot be considered complete.

PUBLIC ELEMENTARY SCHOOLS.

The Report on the Medical Inspection of Schools is issued as a separate volume. The combination of School Medical Inspection with other Public Health Work was completely effected with respect to approximately one-half of the County, as outlined in my last Report, and our experience up to the present time shows that this combination of duties has distinct advantages; in three of the four United Districts the arrangements appear to have been found entirely satisfactory. In the fourth—West Gloucestershire United Districts—which it was fully appreciated would entail the closest application of the Medical Officer of Health if the combined work was to be carried out with advantage, some difficulty has arisen. Deputy Surgeon-General Andrews, R.N., who took over the duties in this district on the 1st August, 1913, includes in his report interesting observations on this subject, in the course of which he says:—

“It has been claimed, as I have already said, that in combining the appointments of Medical Officer of Health and School Medical Inspector there would be economy in the expenses incurred in carrying out the duties of the two offices on the assumption that one journey would serve a double purpose, but my experience has not shown this to be correct, and it will be interesting to observe if that is the experience of others holding joint appointments.”

From observations which have been made by the officers in the other United Districts it would appear that there are exceptional conditions in the West Gloucestershire District which do not obtain in the others, for I am informed that in these districts considerable advantage is gained from the com-

bination of offices, and that one visit to respective parts does serve for both duties. I think it is probable that future experience will confirm these conclusions; meanwhile the arrangements in the West Gloucestershire United District will receive consideration.

Further evidence is given in the reports under review of the most useful work done by many Medical Officers of Health in careful searching for unrecognised cases of infectious disease amongst school children. This work entails considerable time and energy, and often produces only what appear to be results scarcely commensurable with the trouble involved. Records of such work are given in several reports; for example: at Kingswood some 622 children were swabbed for diphtheria and 70 infected children were found; at Stroud a considerable number of "carriers" were discovered; and in Chipping Sodbury Rural District over 200 swabs were taken. Similar search was also made for cases of scarlet fever in several districts. As the importance of the personal factor in the spread of these diseases becomes increasingly appreciated, and the danger of mild cases and "carriers" becomes generally known, combined with systematic observation of children, so will the control over infection be more generally effective.

HOUSING.

The statistics relating to the last census issued since the date of my last Report enable certain comparisons to be made between the conditions existing in 1911 with those in

previous years. The following figures have been abstracted from the volumes for the censuses in 1901 and 1911 :—

		Total Tenements	Tenements with less than 5 rooms		Tenements of less than 5 rooms with more than 2 persons per room	
			No.	%	No.	%
GEOGRAPHICAL COUNTY						
Census 1891 ...	...	142,667	...	64,273	...	45.0
					...	6,058
					...	9.4
		156,765	...	56,589	...	36.1
					...	3,598
					...	6.4
ADMINISTRATIVE COUNTY						
„ 1901 ...	...	75,208	...	28,970	...	38.5
					...	1,630
					...	5.6
„ 1911 ...	...	77,003	...	34,836*	...	45.2
					...	1,684*
					...	4.8

The results for 1911 are not strictly comparable with those for 1901 and 1891 owing to a somewhat different classification being used, and the number of tenements with less than 5 rooms marked with a star being the number of private families and not the number of buildings. It is evident, however, that between 1891 and 1901 there was a very marked reduction in the number of small tenements and an even greater reduction in the extent of overcrowding, as indicated by the proportion of tenements with more than 2 persons per room. The improvement which took place between 1901 and 1911 is masked by the change in classification, but, apparently, in the 20 years overcrowding was reduced in 1911 to about one-half what it was in 1891.

In the consideration of this important question there is a tendency in some quarters to overlook the changes for the better that have taken place in past years, partly owing to social progress and partly to steady improvement in sanitary administration. It is not, of course, suggested that present

TABLE XX.
CENSUS, 1911.

Proportion per 1,000 Tenements of Tenements of various sizes and proportion per cent. of population living in Tenements with more than 2 occupants per room.

DISTRICTS	Proportion of Tenements with						Percentage of Population with more than 2 occupants per room	Average No. of Persons per house	Birth Rate, 1900-9
	1 room	2 rooms	3 rooms	4 rooms	5 rooms	6 rooms and over			
Urban Districts—									
Awre	4	30	118	202	205	441	4.4	4.05	20.25
Charlton Kings	4	16	67	229	298	386	2.3	4.11	23.5
Cheltenham	26	49	80	196	261	388	2.2	4.61	19.7
Cirencester	11	60	183	153	244	349	5.3	4.52	22.1
Coleford	3	77	120	292	165	342	6.5	4.35	25.75
Kingswood	3	22	40	347	277	311	5.5	4.69	28.5
Nailsworth	10	36	168	211	185	389	1.8	3.94	20.8
Newnham	4	32	79	194	209	482	2.1	4.08	19.5
Stow-on-the-Wold	3	81	202	169	223	322	2.3	3.90	22.1
Stroud	6	49	173	178	241	352	4.6	4.33	19.85
Tetbury	18	63	255	199	152	313	4.8	3.95	24.2
Tewkesbury	9	118	226	172	150	324	10.5	4.39	25.7
Westbury-on-Severn	...	28	95	283	148	448	4.1	4.53	23.85
Total—Urban Districts ...	16	49	108	214	245	368	3.7	4.48	21.8
Rural Districts—									
Campden	4	61	255	186	191	302	6.6	4.11	23.65
Cheltenham	2	38	131	199	240	391	2.9	4.29	20.0
Chipping Sodbury	3	53	156	300	185	303	5.3	4.31	22.8
Cirencester	3	48	285	238	198	230	7.9	4.17	22.2
Dursley	13	36	172	214	200	364	4.5	4.18	21.3
East Dean and United Parishes	3	40	105	396	191	265	6.4	4.47	28.95
Faringdon (part of)	...	58	183	295	155	309	3.7	4.21	23.0
Gloucester	3	33	110	192	204	459	3.3	4.89	19.9
Lydney	9	38	122	268	210	353	5.4	4.51	27.1
Marston Sicca	2	25	323	164	241	246	10.3	4.04	20.3
Newent (part of)	7	49	149	281	169	345	4.7	4.27	23.0
Northleach	2	49	274	268	196	211	6.0	4.09	22.3
Pebworth	1	33	226	244	228	267	5.2	4.38	26.3
Stow-on-the-Wold (part of)	4	31	262	218	179	308	5.8	4.25	23.2
Stroud	2	41	186	240	233	298	4.4	4.01	19.7
Tetbury (part of)	2	37	214	269	226	252	8.1	4.37	19.0
Tewkesbury (part of)	8	57	179	261	168	327	5.3	4.13	22.7
Thornbury	3	39	126	251	213	369	4.1	4.38	22.15
Warmley	3	31	62	319	250	336	4.8	4.55	27.7
West Dean	8	86	133	407	152	214	9.5	4.65	31.3
Wheatenhurst	4	40	153	230	212	362	3.8	4.03	21.0
Winchcombe (part of)	8	34	229	245	191	293	6.0	4.23	24.0
Total—Rural Districts ...	4	44	166	272	203	311	5.5	4.31	23.6
Administrative County	8	45	149	254	216	328	5.0	4.36	23.0
England & Wales ...	32	83	139	250	207	289	9.1	5.05	...



housing conditions are satisfactory : far from it. There is room for great improvement which has, however—as above shown—made progress in the last 20 years ; in some parts the needs are greater than in others and some indication of the circumstances is given in the accompanying Table XX. which includes information for the various Sanitary Districts for 1911 as to—

1. Proportion of tenements of various sizes ;
2. Percentage of the population with more than two occupants per room ;
3. Average number of persons per house ; and
4. The average birth-rate for the ten years, 1900-9.

Compared with the proportion of tenements with less than 4 rooms in the whole of England and Wales the position of this County is favourable, and even more so as regards overcrowding, the percentage in the County being 5.0 as compared with 9.1 for the Country as a whole. The districts with high proportions of tenements with less than 4 rooms are,—England and Wales being 254 per 1000 :—

		Proportion of small tenements		Percentage of overcrowding
Tewkesbury Borough ...	...	353	...	10.5
Marston Sicca R.D. ...	...	350	...	10.3
Tetbury U.D. ...	...	336	...	4.8
Cirencester R.D. ...	...	336	...	7.9
Northleach R.D. ...	...	325	...	6.0
Campden R.D. ...	...	320	...	6.6
Stow-on-the-Wold R.D. ...	...	297	...	5.8
Stow-on-the-Wold U.D. ...	...	286	...	2.3
Winchcombe R.D. ...	...	271	...	6.0
Pebworth R.D. ...	...	260	...	5.2
Cirencester U.D. ...	...	254	...	5.3
Tetbury R.D. ...	...	253	...	8.1
Gloucestershire ...	...	202	...	5.0
England and Wales ...	...	254	...	9.1

Other districts with percentages for overcrowding above the average for the County (5.0) are West Dean R.D. (9.5), Coleford U.D. (6.5), East Dean R.D. (6.4), Kingswood U.D. (5.5), Lydney R.D. (5.4), Chipping Sodbury R.D. (5.3), and Tewkesbury R.D. (5.3).

Systematic inspection appears now to be in progress in every district in the County, having been commenced in Thornbury Rural District late in 1913,—but, as the following table shows, not so rapidly as could be desired ; at the rate of inspection in these three years it will take a further 21 years before the first inspection will be completed :—

	Total Houses	No. inspected	Per- centage Inspected	No. with defects for which notices were served	Percentage of houses inspected
Administrative County, 1911	77,003	5,006	6.5	3,117	62.3
1912	77,003	5,105	6.6	2,500	49.0
1913	77,003	5,326	6.9	2,562	48.1
Urban	23,349	1,842	7.9	1,070	58.1
Rural	53,654	3,484	6.5	1,492	42.8

The following observations on the housing question, extracted from the various reports, indicate some of the special circumstances of the different districts :—

URBAN DISTRICTS.

Awre.—It is difficult to get owners to undertake thorough repairs.

Charlton Kings.—All 27 houses inspected had defects.

Cheltenham.—The chief defects are lack of light and ventilation, insufficient water supply, lack of proper closet accommodation, damp and dark rooms, lack of conveniences for decent living (*e.g.*, proper facilities for cooking and storing food, washing accommodation, &c.), overcrowding and general dilapidations.

Cirencester.—Overcrowding of houses without sufficient space in front and rear is the chief difficulty.

Coleford.—It has been decided to call a meeting of the rate-payers to consider the housing question.

Stroud.—A most serious defect is that windows in living rooms do not open. There is a shortage of houses at low rents.

Tetbury.—The defects in the houses are largely due to their great age and their insufficient accommodation.

Tewkesbury.—No really substantial improvement can be effected except by the demolition of houses to ensure free circulation of air in crowded areas.

RURAL DISTRICTS.

Campden.—There is deficiency of cottages at Campden, Moreton-in-the-Marsh and Quinton; Committees have been appointed to consider the matter.

Cheltenham.—A deficiency possibly exists at Shurdington.

Chipping Sodbury.—There is serious overcrowding. Various parts have been visited by an Inspector of the Local Government Board and housing schemes were recommended for 6 parishes. A scheme is more or less in preparation for Frampton Cotterell.

Cirencester.—The proportion of tenements with more than two persons per room is high, and they contain 7.9% of the population. Twelve new cottages were erected by private enterprise. Some of the older cottages need considerable alterations to bring them up to a good standard.

Dursley.—Schemes are progressing for Dursley and Wotton-under-Edge and there is an especially urgent demand in Cam, Coaley and Uley; in Cam 20 houses will probably be built by private enterprise.

East Dean.—Better housing is one of the chief sanitary requirements and there is deficiency in East Dean, Littledean, Longhope, Minsterworth and Mitcheldean.

Marston Sicca.—There is a scarcity in Welford.

Newent.—There is a great want of better accommodation for the working-classes. The chief difficulty as regards repairs is that the necessary money is not forthcoming.

Northleach.—The chief defects are dilapidated roofs and floors, decayed roof timbers, dirty walls and ceilings, insanitary closet accommodation and defective drainage.

Pebworth.—Closing orders have not been enforced owing to the dearth of houses. The Council are erecting 10 houses in Pebworth and propose to build a similar number at Honeybourne.

Stow-on-the-Wold.—There is believed to be a shortage of houses at Bledington, brought about by the large number of railway employees who reside in this village.

Stroud.—The chief defects are living-room windows not opening, general dilapidation and dampness; 30 such windows were made to open but there are hundreds still to be done. The provision of houses is under consideration.

Tetbury.—Most of the unoccupied houses are unfit for habitation and also many of those inhabited, especially at Cherington, Avening and Bagpath. There appears to be a dearth of labour for the purpose of the necessary repairs.

Tewkesbury.—After holding a local inquiry the Council decided to build 10 houses in Ashchurch as soon as a site could be found.

Thornbury.—The inspection was commenced late in 1913. Building schemes are more or less in preparation for Charfield and Sharpness.

Warmley.—The Act is doing good indirectly as well as directly, as owners get defects remedied even before inspection is made. There is a shortage of houses in the hamlet of Bitton.

West Dean.—There are more freeholders than in any other constituency in the kingdom. Additional accommodation is required especially at Bream, Yorkley and Redbrook, and this should be provided by assisting every man to build his own house, rather than by the Council building houses. The model village at Cannop seems to be in a fair way of realization, but the site is in a valley.

Wheatonhurst.—Probably some of the worst houses are in the neighbourhood of Eastington and Frampton, but they have been improved lately.

Winchcombe.—A general report has been made by the Medical Officer of Health who concluded that the following villages were in need of attention, and in point of urgency in the order given: Snowhill, Gretton, Winchcombe, Alderton, Lower Guiting, Beckford and Cutsdean. The Council held local inquiries at Winchcombe, Alderton and Beckford, and are arranging for a number of houses to be built in each place.

WATER SUPPLY.

A summary of the sources of supply in the various Urban and Rural Districts is given in Table XXI. Scarcity in various parts was experienced during the latter part of 1913, though the rainfall for the whole year was not much below the average. Such seasons as this, however, give indications to local authorities of the weak points in their districts and of the places which should be carefully watched; in time of drought it is in those places that want and anxiety will be serious sources of trouble. There appears in some parts to be an idea that the responsibility lies solely on the owners of property; they certainly have responsibilities which have generously been borne in many parts of the County, but local authorities also have responsibilities and duties. One of these is to ensure that every occupied dwelling-house has within a reasonable distance an available supply of wholesome water, and powers to require owners to provide such supply are given them; but nothing in the section of the Public Health (Water) Act, 1878, relieves the authority of the duty imposed upon them of providing their district with a supply of water where danger arises from the insufficiency or unwholesomeness

of the existing supply. Much has been done, but much remains to be done before this duty of local authorities will be completely fulfilled.

The only new supplies provided during 1913 appear to be those for Churchdown, in the Gloucester Rural District, by an extension of the City mains ; and for Long Marston, in the Marston Sica Rural District,—where for years the deplorable conditions were a subject of complaint—by an extension of the mains of the Evesham and Pebworth Villages Water Committee. A scheme for the supply of hamlets in the parish of Ashchurch, in the Tewkesbury Rural District, was sanctioned by the Local Government Board ; and schemes were under consideration for the supply of the Tetbury Urban District and for certain parts of the Winchcombe Rural District.

As regards the Forest of Dean, where the question of water supply has been acute for many years, some little progress was made during 1913. In the northern portion, the East Dean Rural District Council are gradually developing their arrangements for the supply of Ruardean Hill, a contract for the necessary pumping machinery having been accepted, and provision made for taking in hand the service reservoir and mains during 1914. A definite step has also been taken in regard to the southern portion in that at the end of the year the West Dean Rural District Council decided to adopt and carry out Mr. Radford's comprehensive scheme for a supply from Howbeach, subject to the Treasury making a substantial contribution. In this proviso

the District Council were supported by the County Council, whose representatives interviewed the Gaveller of the Forest, and it is hoped that their efforts will result in the Crown regarding the duties of landlord in a broad and generous spirit.

The resources of the County are gradually being improved, and in the following notes from the reports for 1913, for the various districts, further evidence of improvement will be found, and also instances of room for further activity:—

URBAN DISTRICTS.

Cheltenham.—On the observations and advice of Dr. Garrett a most interesting experiment was carried out and is being watched. It was found that *Chara Vulgaris*, a water weed which has been the cause of much trouble, did not grow on smooth surfaces; one of the reservoirs has therefore been lined with smooth cement concrete and, if this proves successful, the fellow reservoir will be similarly treated. (See also p. 86).

Coleford.—Great deficiency has been frequently noted. During 1913 further consideration was given to the matter and application was made for a loan of £200 to clean out the Mill Pound Pit in the hope that a sufficiency of water might be found.

Kingswood.—The supply was intermittent during October and November, partly owing to shortage and partly to a breakdown at the pumping station. The Company is promoting a Bill for a new source of supply.

Nailsworth.—A new storage reservoir is being constructed by the Company at Forest Green.

Newnham.—The privately owned supply has not been so satisfactory as in previous years. The pipes leaked and improved storage is required.

Tetbury.—Anxiety has been caused by the shortness of the supply for many years; a well on a fresh site is proposed and application has been made for a loan of £795.

RURAL DISTRICTS.

Campden.—Bourton-on-the-Hill—No scheme can be suggested for improvement except at prohibitive expense.

Cheltenham.—Some parishes have public supplies and further areas could be supplied at a reasonable cost. Shortage occurs in dry seasons in parishes supplied by wells—Little Witcombe, Crickley, Bentham, Bamfurlong and Staverton—all of which are not above suspicion.

Chipping Sodbury.—An extension of the mains to Westerleigh has been agreed.

Cirencester.—In six parishes the supply is inadequate in dry weather.

Dursley.—Cam—There is a great need for a public water supply; but no improvements were effected during 1913.

East Dean.—Ruardean Hill—A contract has been accepted for pumping machinery: the reservoir and mains will be taken in hand during 1914.

Viney Hill.—A conference was held with the West Dean Rural District Council, and it is hoped that a scheme proposed will be accepted by that Council.

Gloucester.—Churchdown—The mains have been laid.

Tuffley and Hempstead.—Proper supplies are wanted. At Lower Rea, in Hempstead, water was supplied by cart during the very dry weather.

Marston Sicca.—Long Marston—The supply urgently needed for so many years has been provided by an extension of the mains from Pebworth.

Pebworth.—An additional source has been obtained to supplement the supply of four parishes.

Ashton-under-Hill.—Shortage was experienced and steps are being taken to augment the supply.

TABLE XXI.
WATER SUPPLY, 1913.

URBAN DISTRICTS—		REMARKS.
Awre	Wells	No shortage under ordinary conditions
Charlton Kings ... (constant)	Cheltenham Corporation Water; few wells	
Cheltenham (constant)	(1) Severn at Tewkesbury; (2) Hewlett's Reservoir (springs); (3) Dowdeswell Reservoir (head waters of River Chelt)	Reservoir cemented to determine effect in inhibiting growth of <i>Chara Vulgaris</i>
Cirencester	Artesian wells	Still many shallow wells
Coleford	Spring, stored in underground reservoir	Causes grave anxiety. Question of better supply under consideration
Kingswood	West Gloucestershire Water Company	Some shortage during autumn
Nailsworth (constant)	Stroud Water Co.—53% of houses; others—wells and springs	No marked shortage though dry year. New service reservoir under construction at Forest Green
Newnham (constant)	Private Supply	Not so satisfactory as formerly
Stow-on-the-Wold (intermittent)	Public Supply—well, 130 ft. deep; supply reservoir of 25,000 gallons on tower 40 ft. high	Half of houses supplied from standpipe
Stroud (intermittent)	Stroud Urban Water Works—(1) Subsoil water, upper supply; (2) Deep spring, lower supply; (3) Stroud Water Company	Supply held out well, but water obtained from Company in autumn; softening desirable
Tetbury	Public Supply—bore holes	General question under consideration; application for loan of £795 for preliminary investigation of source
Tewkesbury	Cheltenham Corporation Water	Supplied from the Cheltenham Reservoirs and from Severn, 1913
Westbury-on-Severn	Wells	
RURAL DISTRICTS—		
Campden	Public Supplies for Adminton, Chipping Campden, Hildcote-Bartrim, Ebrington, Moreton-in-Marsh and Quinton; other parishes, wells and springs	Bourton-on-the-Hill, no satisfactory supply found
Cheltenham	Cheltenham Corporation Water for Badgeworth, Leckhampton, Prestbury, Staverton, Swindon, Uckington, and Up-Hatherley (in part); Great Witcombe, 2 piped supplies; Cowley—partly public supply; other parishes—wells and springs	Wells and springs at all times liable to contamination; better supply wanted in more densely populated parts of rural areas
Chipping Sodbury	West Gloucestershire Water Company in towns of Chipping Sodbury and Wickwar, and in parishes of Filton, Stoke Gifford, Tormarton, Winterbourne, Frampton Cotterell, Yate, Old Sodbury, Badminton, Pucklechurch, Wick and Doynton; also wells	Extension of mains to Westerleigh agreed.
Cirencester	Public supplies—Ampney Crucis (part), Bagendon, Baunton, Brimsfield (Birdlip, part of), Coates, Colesborne, Daglingworth, Duntisborne Rouse, Fairford (part of), Hatherop, Kemble, North Cerney, Poole Keynes, Poulton, Quenington, Rendcombe, Rodmarton and Stratton.	The supply of 6 parishes is inadequate in dry weather
Dursley	Public supplies—Coaley, Dursley, Kingswood, Wotton-under-Edge; other parishes—springs and wells	Cam—there is a great need for a public supply
East Dean and United Parishes	Public supplies—East Dean (Blakeney Hill, Cinderford and Horsepool Bottom), Littledean and Mitcheldean	Ruardean Hill—matter progressing
Faringdon (Lechlade)	From gravel beds to north of Town; water pumped to tank by oil and wind engines and supplied by gravitation; also surface wells	
Gloucester	Gloucester City Water in North-end Drainage District; else—various	Churchdown—nearly completed. Tuffley and Hempstead—supplies desirable
Lydney	Public supplies—Lydney and Allaston Mesne pumped from Fernyely Wood and Woodaston—also private supplies at Alvington (upper part) and Tidenham	Woolaston, provided at Netherend
Marston Sicca	Evesham and Villages Water Scheme—Long Marston	Main extended during 1913
Newent	Newent, by Gloucester Corporation; wells	
Northleach	Well and river	Aldsworth—better supply wanted. Withington—improvements needed
Pebworth	Aston-Somerville, Cow Honeybourne, Hinton-on-the-Green and Pebworth—Evesham Villages Water Scheme; Childswickham, from Borough of Evesham; Ashton-under-Hill, Aston-sub-Edge, Saintbury, Weston-sub-Edge and Willersey—local public supplies from springs	Additional source secured for Evesham Villages Water Scheme
Stow-on-the-Wold	Public supplies at Broadwell, Church Incomb, Great Rissington, Icomb, Longborough, Namton and Oddington. Private supplies at Addlestrop, Great Barrington, Little Rissington, Lower Swell, Matgersbury, Upper Slaughter and Upper Swell. Springs and wells at Lower Slaughter and Westcote; springs at Clapton, Condicote and Notgrove; and shallow wells at Bledington, Bourton-on-the-Water and Eyford.	Bledington—supply needed
Stroud (intermittent)	Stroud Water Company supplies 13 parishes, 36 % of houses; private supplies in a few places; wells and springs.	Bisley—a supply would be a great boon
Tetbury	Public supplies—Avening, Cherington, Didmarton, Long Newton; Shipton Moyne, Weston Birt and Lasborough, from Holford Estate	Parts much in want in dry weather, especially Ashley, Leighterton and Tetbury Upton
Tewkesbury	Kemerton, from Bredon Hill; Oxenton, Woolstone and Stoke Orchard, from Cotteswold Hills; Ashchurch and Boddington, from Cheltenham mains; Aston, Fiddington, The Holmdown and Walton Cardiff, from pools.	Pamington, Fiddington, Homedowns—scheme sanctioned
Thornbury	West Gloucestershire Company in Almondsbury, Thornbury, Tytherington, and Northwick and Redwick; Bristol Water Company at Henbury	
Warmley	West Gloucestershire Water Company's mains over nearly whole area	3 sources used during 1913. Complaints of hardness and colour received
West Dean	Springs, draw-wells and rain water tanks.	Supply is urgently needed. Scheme under consideration
Wheatenurst	Stroud Water Company—Part of Eastington; wells	Certain parts badly supplied. Western portion entirely dependent on rain water or shallow wells
Winchcombe	Public supplies—Lower Guiting and Winchcombe; private supply—Toddington; very few of the vale villages have not a supply laid on to them; wells and springs	Comprehensive scheme for Alderton, Bishop's Cleeve, Great Washbourne, Southam, Winchcombe and Woodmancote now before the Local Government Board
Sources of Companies' Water—		
Bristol	Springs on the Mendips.	
Cheltenham (Corporation)	1. Severn at Tewkesbury; 2. Hewlett's Reservoir (springs); 3. Dowdeswell Reservoir (head waters of River Chelt)	
Gloucester (Corporation)	1. Robinswood Hill Reservoirs (springs); 2. Witcombe Reservoirs (impounded streams and springs); 3. Oxenhill Reservoir (well in new red sandstone)	
Stroud	Well in Lias Sands, softened by modification of Porter-Clark method	
West Gloucestershire	Disused iron mines at Coalpit Heath (Frampton Cotterell) and Cowhorn Hill (Bitton); Californian Colliery, Dodd Lane, Oldland Common. Hardness lessened by aëration and other mechanical means	Source opened at Dodd Lane, Oldland Common in 1911, discontinued 1912, and again brought permanently into use 1913. Bill promoted for new source at Shipton Moyne

Stow-on-the-Wold.—Bledington—The wells are subject to contamination and the present supply is very unsatisfactory. Two schemes were proposed by an engineer, but both were regarded as too costly and neither was carried out.

Stroud.—Bisley and Randwick have not been supplied by the Water Company.

Tetbury.—Leighterton and Tetbury Upton are insufficiently supplied in dry weather. The West Gloucestershire Water Company propose to get powers to supply the greater part of the district.

Tewkesbury.—Ashchurch Hamlets—A loan of £2,500 has been sanctioned for the extension of the mains to supply those hamlets.

Warmley.—The West Gloucestershire Water Company brought the Californian Colliery source into use again, and there were serious complaints of hardness and discolouration. The Company is applying for extended powers, including the provision of a new source at Shipton Moyne.

West Dean.—Inadequacy is felt more or less acutely over the whole district. At the end of the year the Council adopted a comprehensive scheme subject to a substantial contribution being received from the Treasury.

Wheatenhurst.—Certain parts are badly supplied; the western portion is entirely dependent on rain water or shallow wells, and there were complaints especially from Whitminster and Moreton Valence. An extension of the Standish Park mains was suggested, but the Council was unwilling to undertake the work, and suggested to the Moreton Valence Parish Council that they should consider the question of forming a special water area for that parish. No reply had been received by the end of the year.

Winchcombe.—Lower Guiting—The scheme is in course of completion. A comprehensive scheme for the supply of six parishes and parts of parishes, including Cleeve Hill, was the subject of a Local Inquiry by the Local Government Board at the end of 1913.

SEWERAGE AND SEWAGE DISPOSAL.

The following are short notes gathered from the reports for 1913 :—

URBAN DISTRICTS.

Awre.—The closets are mostly pail closets and there is a complete absence of privy vaults.

Cheltenham.—The disposal works are nearing completion.

Coleford.—The sewerage is in a very serious condition and is a danger and a menace to the health of the town. A scheme should be prepared.

Kingswood.—Stoddart's fixed distributors were replaced by two Adams' revolving distributors. The effluents continue to be satisfactory. There are 1,674 hand-flushed closets and 732 privy vaults.

Nailsworth.—Three hundred and nine of the total 774 houses have been connected with the sewers.

Stow-on-the-Wold.—The only sewer is one laid to drain houses in the immediate neighbourhood of the water works. The general custom is to discharge all drainage into cracks in the rock.

Stroud.—It is desirable that arrangements should be made whereby the unconnected houses at Bowbridge and Paganhill should be drained into the sewers of the neighbouring Council. The new disposal works will be finished in a few months.

Tetbury.—The scheme for connecting a group of houses in Charlton Road was postponed in view of the expense to be incurred in connection with the water supply.

Tewkesbury.—The policy of relaying the sewers has been maintained.

RURAL DISTRICTS.

Campden.—Bourton-on-the-Hill—The improvements appear to be satisfactory to the Thames Conservators.

Campden.—On a letter from the Local Government Board the matter will be considered.

Moreton-in-the-Marsh.—The new sewer has been completed.

Cheltenham.—Prestbury—Improvement has been effected by the completion of the scheme.

Chipping Sodbury.—Filton—The sewers have been extended. The pumping station is working satisfactorily.

Wickwar.—A new sprinkler has been provided.

Cirencester.—Fairford—A new sewer has been laid to obviate overflow to the Thames.

Preston.—A new drain and settling tanks have been provided to prevent pollution of the Churn.

Dursley.—Dursley and Cam—In Dursley 499 of the 581 houses have been connected but only 44 of the 437 houses in Cam. Eighty-seven houses in Dursley are connected with an old sewer discharging to the brook.

Wotton-under-Edge.—A scheme estimated to cost £10,500 has been sanctioned.

Kingswood.—A scheme of sewerage is desirable.

Nympsfield.—Pollution of a well and flooding of a cellar have been caused by the stoppage of a surface water drain to which 24 houses have been connected.

East Dean.—Drybrook—Strong complaints were received during 1913 of nuisance caused by the discharge of sewage to the brook, and a special report by Dr. Andrews is under consideration.

Steam Mills and Littledean.—Drainage is needed.

Gloucester.—Churchdown—The scheme, estimated to cost £11,565, was expected to be in working order in April, 1914.

Longlevens and Tuffley.—Drainage systems are required.

Newent.—The drainage system is ancient. New and enlarged filter beds are required at the disposal works.

Pebworth.—Ashton-under-Hill—The open road drains have been replaced by 12-inch pipes. A similar course is recommended in other villages.

Stow-on-the-Wold.—Broadwell—A simple scheme to prevent pollution of the Evenlode is in hand.

Lower Swell.—The sewage is now treated by a system of broad irrigation to abate pollution of the Dikler.

Stroud.—Minchinhampton—A septic tank and filter have been constructed.

Tetbury.—Didmarton—There is one sewer but there are no satisfactory means of sewage disposal.

Leighterton.—Notice was served on the owner of a farm to prevent drainage from overflowing the road by carrying it in pipes to a field for irrigation thereon.

Warmley.—Siston—The scheme has been completed and houses are now being connected.

Wheatenhurst.—Saul and Frampton-on-Severn—Surface water drains have been converted into anomalous sewers by long usage as such, and these have given considerable trouble from time to time.

Winchcombe.—Winchcombe—Though the scheme was completed in 1911 there are still 127 houses not connected.

From the above account it would appear that there has been fair activity in providing new systems of sewerage and sewage disposal or in improving existing disposal works. Thus, new disposal works are being provided at Stroud ; new sewers have been laid at Fairford and Preston in the Cirencester Rural District ; a comprehensive scheme has been adopted for Wotton-under-Edge in the Dursley Rural District ; a drainage scheme has been carried out at Churchdown in the Gloucester Rural District ; schemes for the disposal of sewage have been or are being carried out

at Broadwell and Lower Swell in the Stow-on-the-Wold Rural District; new disposal works have been constructed at Minchinhampton in the Stroud Rural District; and a sewerage scheme has been carried out at Siston in the Warmley Rural District.

It is, however, also evident from the reports, that not only are there places requiring proper sewerage and disposal works to which attention has been drawn on former occasions, but also some to which reference has not previously been made. Among the former are Coleford Urban District, and Chipping Campden in the Campden, Drybrook in the East Dean, and Tuffley in the Gloucester Rural Districts. Places to which attention has not recently been drawn prominently are Kingswood and Nympsfield in the Dursley, Steam Mills and Littledean in the East Dean, Longlevens in the Gloucester, Didmarton in the Tetbury, and Saul and Frampton-on-Severn in the Wheatenhurst Rural Districts.

The manner in which expensive sewerage schemes are gradually thrust upon rural parishes by increasing use of water-carriage and the pollution of ditches and streams, and the possibility of avoiding them by constant watchfulness and prevention of each case as it arises, have been mentioned in previous issues of this Report, and it would be repetition to deal more fully with the matter now, important though it is. The present reports bear evidence that the history is being repeated in many places in the County and, as Dr. Ashley says in his report on the Wheaten-

hurst Rural District, "the custom of using highway drains "as sewers is not uncommon and is likely to lead to trouble "in the future." Much of the trouble in rural villages would be avoided if steps were promptly taken to prevent the introduction of water-carriage for sewage in places where it is quite unnecessary and to stop cases immediately they arise.

RIVERS POLLUTION

Pollution of streams and rivers by sewage appears to require the attention of the local sanitary authorities, more or less urgently, in the following parts:—

URBAN DISTRICTS.

Coleford.—The brook receives all water-carried sewage.

RURAL DISTRICTS.

Campden.—Chipping Campden—The sewers discharge to the stream just below the town.

Cheltenham.—Pollution of the streams is likely to occur from broad irrigation on clay subsoils.

Chipping Sodbury.—The Frome Brook appears to receive, directly or indirectly, the drainage from various places.

Dursley.—The Cam is polluted by drainage from Cam and Dursley, and Dyer's Brook from Wotton-under-Edge and Kingswood.

Stroud.—The trade processes are not conducive to clean streams.

Tetbury.—The Avon receives the effluent from the Urban sewage disposal works and the cattle market, and the Avening Brook the drainage of houses by way of the surface drains.

Warmley.—The Avon is under observation in view of the construction of the Bath disposal works.

DISPOSAL OF HOUSE REFUSE.

The disposal of house refuse, so as not to be an annoyance or danger to the individual or his neighbour, is a problem both for the householder in scattered districts and for the local authority in more populous places. There appears to be a consensus of opinion that, as far as possible, all refuse should be burnt, and that organic material which cannot be readily burnt should be buried within a few inches of the surface of the soil. The general tendency is, however,—on the part of local authorities as well as individuals—to allow the refuse to accumulate in heaps on the ground till they become a nuisance from their bulk. Their size is far from being the only source of nuisance, for there are many other objections to such accumulations, of which the present and previous sets of reports bear evidence. Among them are nuisances from smell, owing to decay and slow combustion, from flies and from rats; the last trouble arises chiefly in connection with large accumulations, such as refuse tips in fields and other places. The trouble from flies is probably the most serious from the health point of view, and it is satisfactory that the public at last appear to begin to appreciate the dangers. A concrete example of this appreciation is given in the case of *Bland v. Yates*, in the Chancery Division, reported in *The Times* of the 26th, 27th and 28th May, 1914, as a result of which an injunction, restraining the defendant from depositing manure, was granted, largely on the ground of nuisance from flies breeding on it.

Accounts have been given in previous issues of this Report of the potential danger of the carriage of infection by flies and of the experiments which have been conducted to determine the range of their infective powers, and any further observations would in the main be repetition of previous remarks. It may, however, be mentioned that at least four Medical Officers of Health in their reports for 1913 draw special attention to this matter in connection with refuse disposal. Thus Dr. Thomson (Marston Sicca R.D.) says:—

“Greater provision of covered receptacles for household refuse would assist in preventing the spread of disease by means of flies; these filth bearers exist in exact ratio as food supply and breeding grounds for them exist.”

Dr. Rhind (South Gloucestershire United District) says:—

“It is fully recognised now that many infantile ailments and deaths are due to food contamination by the house-fly, which breeds in and feeds upon the heaps of household refuse and garbage. We can estimate the amount of infantile deaths that arise from these diseases, but we cannot estimate the amount of chronic ill-health which so many of the children of the poor suffer from.”

In view of these dangers, as well as of the occasional nuisances which arise, it cannot be considered satisfactory that there appears to be systematic collection of refuse in only 10 of the 13 Urban Districts, and in only 17 parishes (including Bourton-on-the-Water in the Stow-on-the-Wold Rural District, which was first scavenged in 1913) in the 22 Rural Districts in the County, though it has been recommended by the various Medical Officers of Health for

many places year after year. Places specifically mentioned in these reports are Campden and Moreton (Campden R.D.), populous parishes (Cheltenham R.D.), all parts (Chipping Sodbury R.D.), Stratton (Cirencester R.D.), Mitcheldean (East Dean R.D.), Northleach (Northleach R.D.) and Winchcombe (Winchcombe R.D.).

Nuisance from refuse tips is referred to in the reports for Charlton Kings U.D., Cirencester U.D., Cirencester R.D. (Stratton) and Dursley R.D. (Dursley). A refuse destructor has been provided in the Stroud Urban District, and one is recommended for the Charlton Kings Urban District.

FOOD SUPPLIES.

In the Urban Districts, as a whole, considerable care and attention appear to be given to the supervision of places supplying milk and meat, but in Rural Districts it is scarcely practicable to make such close inspection and in some it would appear that less attention is given to the matter than it deserves. In few Rural Districts is it stated that slaughter-houses are visited at the time of slaughtering, which probably accounts in some measure for such observations as that of Dr. Green, that :—

“ Though pigs are specially prone to tuberculosis and though large numbers are slaughtered in the district, apparently none of them are tuberculous.”

On the other hand, in Cheltenham, of 6,891 carcasses inspected, 15 (2 heifers and 13 pigs) were destroyed on account of tuberculosis in a generalized form ; the interest-

ing note is added that "none of them were emaciated or even "of bad quality." The conclusion would appear to be that in other districts such cases escape detection, and that the meat is sold to and eaten by the public.

SALE OF FOOD AND DRUGS ACTS.

The number of samples examined under these Acts during the past six years has ranged from 455 in 1908 to 464 in 1910 and 1913, or about 1.41 per 1,000 of the population ; this is slightly more than half the average for the whole Country (excluding London) in 1912, viz., 2.6 per 1,000. In Somerset the proportion was 2.5, in Warwickshire 1.85, and in Worcestershire 3.63 in 1912. The number of samples taken in this County is comparatively small, and there would appear to be reason for greater activity, for, as will be seen from the accompanying table, the tendency is for an increasing number of samples of milk to be found adulterated.

The practice of taking unofficial samples through agents has been continued, and the proportion of unofficial samples increased until in 1913 nearly three-fourths were so taken. The number of adulterated samples was 26, 8 less than in 1912 ; there was a corresponding drop in the percentage of adulterated samples from 7.3 in 1912 to 5.6 in 1913, the percentage for the whole Country being 8.4 in 1912. On a closer examination it is seen that 80 % of the adulterated samples were milk samples, and that the proportion of milk

TABLE XXII.
SALE OF FOOD AND DRUGS ACTS.

Gloucestershire Administrative County. Population 1911 ; 329,014													
1908		1909		1910		1911		1912		1913			
Exam.	Adul.	Exam.	Adul.	Exam.	Adul.	Exam.	Adul.	Exam.	Adul.	Exam.	Adul.	Exam.	Adul.
Milk	138	6	138	6	153	17	117	12	88	15	111	20	
		<i>4.3</i>		<i>4.3</i>		<i>11.1</i>		<i>10.2</i>		<i>17.0</i>		<i>18.0</i>	
Butter	102	2	107	—	72	—	103	1	111	2	109	1	
Margarine... ..	1	—	1	—	9	—	2	—	—	—	4	—	
Tea, Coffee, Cocoa ...	35	—	38	1	49	—	44	—	24	—	25	—	
Sugar	36	—	32	—	37	—	36	—	46	—	40	—	
Other Foods: Lard, Bread, Flour, Rice, Cheese ...	37	—	32	—	29	—	38	—	50	—	42	—	
Alcoholic Drinks... ..	59	1	70	4	79	3	81	7	96	14	81	5	
		<i>1.7</i>		<i>5.7</i>		<i>3.8</i>		<i>8.6</i>		<i>14.6</i>		<i>6.2</i>	
Others	47	—	43	1	38	—	44	—	49	3	54	—	
Total	455	9	461	12	466	20	465	20	464	34	466	26	
Percentage Adulteration ...		<i>2.0</i>		<i>2.6</i>		<i>4.3</i>		<i>4.3</i>		<i>7.3</i>		<i>5.6</i>	

Figures in italics==percentages.

samples found adulterated has increased each year from 4.3 % in 1908 to 18.0 % in 1913, *i.e.*, in the latter year over one sample in every six was adulterated: the proportion for the whole Country in 1912 was 10.9 %. I would suggest that the total number of samples taken should be increased, so that double the number of milk specimens may be examined.

PRESERVATIVES IN CREAM.

Of 17 samples of cream examined for preservatives during the present year, 6 were found to contain preservative which was not declared as required by the Regulations. Formal samples were taken in the six cases with the same result, and on proceedings being taken, fines were inflicted in each case.

ADOPTIVE ACTS AND BYE-LAWS

The only change recorded in the Annual Reports is the adoption of a new code of Building Bye-laws in the Kingswood Urban District.

In my last Report I gave lists of the districts in which advantage had not been taken of useful powers under certain Adoptive Acts, and also of the districts in which Building Bye-laws and Regulations as to Dairies, &c., had not been adopted. It would appear that the value of these powers and the improvement in sanitary conditions which can be effected through their use are not fully appreciated in those districts.

MIDWIVES ACT, 1902.

The following is a summary of the Report on the administration of the above Act during 1913 :—

The number of certified midwives practising during 1913 was 286, somewhat less than in 1912 (293) and than in 1911 (314)—the highest in any year. Rather more than half the number work for District Nursing Associations, and the proportion is steadily increasing. The midwives on the roll who were certified on the ground of having been in practice before the Act of 1902 are gradually giving up or dying, and the number of trained midwives increases in about the same degree ; 31 of the former have died in the past 9 years, and 35 have resigned their certificates.

At the end of 1912 the number of parishes for which the services of no certified midwife were available was 56 with a population of 23,568.

During 1913 the County Nursing Association trained 6 women all of whom passed the examination of the Central Midwives Board : 5 of these were placed in districts and one was reserved for emergency work. One new district, including Rangeworthy, Iron Acton and parts of Yate, was started by the Association during 1913, and one (Hartpury) became affiliated. Two District Nursing Associations (Tetbury and Whitminster) were given up during the year, but it is hoped they may be revived. The general result is that the number of affiliated Associations is the same as

at the end of 1912—64, with 76 nurses. The number of District Nursing Associations not affiliated with the County Association is 17.

The number of parishes unprovided at the end of 1913 was 58, with a population of 28,210. The services of the "King Edward VII. Memorial Nurses," for general nursing (including midwifery), have been offered to these parishes by the County Nursing Association on payment to the Association of an annual registration fee of one shilling and a charge of ten shillings per week with suitable board, lodging and washing for the Nurses when engaged, but practically no advantage has been taken of this offer. The Memorial Nurses have, however, done most useful work in the County by taking holiday duty in 12 districts and emergency work in 6 places.

In 7 of the 14 Workhouses in the County no Certified Midwife is employed.

Advantage is taken of the provisions for Maternity Benefit under the National Insurance Act, 1911, to control unqualified practice. In all the cases so far brought to my knowledge the women have given an undertaking that they will, in future, attend cases only with a doctor.

The proportion of confinements attended by Certified Midwives in this County is about 54 %.

The number of still-births recorded during 1913 was larger than in any previous year, and special enquiries on this matter are being made.

From the returns received during the eight years 1905-12, it appears that medical assistance was sought in 10 % of cases on account of the mother and slightly over $1\frac{1}{2}$ % on account of the child.

The supervision of the practice of Certified Midwives is steadily maintained, about 750 visits being paid each year, an average of nearly three inspections of each Midwife. On the whole the inspections during 1913 were of a routine character and call for little comment, but there appears to be evidence that the standard of work is improving. The continued general oversight of the practice of midwives is desirable to encourage them to aim at the highest standards of cleanliness and work.

The majority of the visits were paid by Miss C. A. Lee, the Assistant Superintendent of the County Nursing Association, who has continued the good work done by her predecessors.

I have pleasure in recording once more the satisfactory character of the arrangements with the County Nursing Association, and my appreciation of the ready assistance the Hon. Secretary (Mrs. W. Playne) and the Superintendents have always accorded me.

HEALTH VISITORS AND THE CO-ORDINATION OF PUBLIC NURSING.

In July, 1913, the Local Government Board forwarded to the County Council a copy of their circular letter of the 25th July, 1913, to Local Sanitary Authorities, in which they advocated the adoption of the Notification of Births Act, 1907, and the appointment of Health Visitors to give advice with the object of preventing infectious diseases of infancy, including those arising in connection with improper feeding. At the same time the Board suggested the combination of this office with those of Inspector of Nuisances, Tuberculosis Visitor or School Nurse. After consideration of the letter, the County Council communicated with the Local Sanitary Authorities to ascertain their views as to the adoption of the Act and as to the suggested combination of duties. The replies are even now incomplete, but it would appear that the main objection to anything being done is the question of expense. On the other hand, definite proposals of combined action for this purpose have come from the Stroud Urban and Rural District Councils.

The combination of duties has also been before the two County Committees specially concerned, viz., the Education Committee and the Joint Committee for Tuberculosis, who have appointed Sub-Committees to consider the matter.

For the information of these various Committees I reviewed the whole question in a report which was issued in the present year.

The three branches of work considered were :—

1. HEALTH VISITING UNDER THE ABOVE ACT AND WITH RESPECT TO THE CONDITIONS OF HOMES AND OF PLACES WHERE WOMEN ARE EMPLOYED.

This entails an entirely new departure so far as this County is concerned, and would involve the adoption of the Act either by the County Council or the respective District Councils.

2. SCHOOL NURSING.

At the present time the Education Committee employ three School Nurses and also the services of District Nurses for Medical Inspection. Two further whole-time Nurses will be engaged in connection with the scheme of Dental Treatment. Even with the additional assistance the staff will be insufficient to do all the work, and to carry it out completely in the manner that is desired by the Committee will necessitate the appointment of a total of 8-10 Nurses instead of the 5 above-mentioned.

3. TUBERCULOSIS.

The Joint Committee have appointed three whole-time Nurses, and District Nurses equivalent to a fourth

whole-time Nurse. Two further whole-time Nurses will be required in accordance with the complete scheme.

Leaving the first branch of work out of consideration, there would be advantages (including reduction of time and money spent in travelling) in combining the second and third, and this combination will be considered shortly. When this is effected the equivalent of only five additional whole-time Nurses would be sufficient to carry out all three duties, whereas for the third, Health Visiting, alone it is estimated that 10-12 whole-time Nurses would be required.

As regards cost, it is obvious that by such complete combination as is suggested, the expense to each of the three authorities for the three branches of work would be less than if they are carried out separately. The proportion of the cost for the three branches of work to be borne directly by the County rates, varies, as grants are or will be available as follows:—

1. HEALTH VISITING.

Under the Finance Bill, 1914, it is proposed that one-half of the salary of officials appointed under the Public Health Acts shall be paid from Imperial funds. This is a new provision since the date of my report on this matter, and would mean a grant of between £300 and £400 if this work is undertaken and the grant obtained.

2. SCHOOL NURSING.

One-half the salaries of the Nurses is payable by the Board of Education.

3. TUBERCULOSIS.

Approximately one-third of the cost falls on the County rates, the remainder coming from the Local Government Board and the Insurance Committees.

The net result is that the cost to the County rates of the addition of Health Visiting to the expense of the complete staff of Nurses for School and Tuberculosis work would be half the salary and expenses of five whole-time Nurses, namely, about £300 per annum.

This matter has also been under the consideration of the County Nursing Association, who are anxious that the work should be done by their Nurses. Two difficulties that have been mentioned by members of the Association are that it is not possible to ensure District Nurses keeping appointments in view of midwifery and other urgent engagements, and that the examination of children's heads is very unpopular work. On the other hand, there are advantages in utilizing the services of District Nurses as far as possible, and I have suggested a combination of the two proposals, namely, the appointment of a certain number of whole-time Nurses, and the inclusion of District Nurses who are suitable for the work and whose Associations are willing that they should undertake it. The former would

work in all parts of the County unprovided with nurses, and also in places where the District Nurses do not act for this purpose. If it is found in practice that District Nurses can usefully undertake all the duties, their share in the work could gradually be extended and the number of whole-time Nurses proportionally reduced.

SUMMARIES
OF
ANNUAL REPORTS
OF
Medical Officers of Health, 1913.

Area 4,317 Acres. Assessable Value : £9,988. 1d. Rate : £42.

Population 1901	...	1,096
1911	...	1,070

Decrease 1901-11	...	26 (2.4%)
------------------	-----	-----------

Estimated Population 1913	...	1,061
---------------------------	-----	-------

Medical Officer of Health :

O. W. Andrews, M.B., D.P.H., Deputy Surgeon-General R.N.

CHIEF GEOLOGICAL SUBSTRUCTURES :—Old Red Sandstone, Keuper Marl and Lower Lias.

CHIEF INDUSTRIES :—Agriculture; also colliery population in western portion and fishing in southern part.

This District was included in the West Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Andrews, the first officer, took over the duties at the end of July, 1913.

HOUSING.

Thirty-three houses were inspected and 20 found to have defects, 16 of which were remedied. It is said that so much progress has not been made as could be desired, owing to the difficulty experienced in getting owners of property to undertake thorough repairs; and, owing to the increased cost of building materials, it is impossible to build suitable houses for which an economic rent is obtainable. Dr. Andrews includes a full report on the Housing Conference at Bath.

SEWERAGE AND SEWAGE DISPOSAL.

The closets are mostly pail closets, but there are also some water closets; what is of real importance is the complete absence of common privies with their foul vaults.

WATER SUPPLY.

Taken as a whole there are few districts better supplied with water; but in dry weather the occupants of 4 houses at Brain's Green have to carry water some 200 yards.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 3 slaughter-houses, 23 dairies, &c., 3 bake-houses (a decrease of 1) and 3 workshops, all of which are frequently inspected. Two farmyards were improved, and necessary improvements were effected in a fruit-packing shed.

INFECTIOUS DISEASES.

The only cases notified were two of tuberculosis.

ISOLATION HOSPITAL.

The hospital for this district is the Joint Isolation Hospital at Green Bottom, Littledean.

Area 3,399 Acres. Assessable Value : £24,692. 1d. Rate : £103.

Population 1901	...	3,806
1911	...	4,495

Increase 1901-11	...	689 (18.1%)
------------------	-----	-------------

Estimated Population 1913	...	4,600
---------------------------	-----	-------

Medical Officer of Health ... H. M. Meyrick-Jones, M.D.

CHIEF GEOLOGICAL SUBSTRUCTURE: Lower Lias.

CHIEF INDUSTRIES: Residential, and production of milk.

HOUSING.

Twenty-seven houses in Church Piece, Ryeworth and Bafford Lane, were inspected and all found to have defects, the chief of which were want of properly ventilated food cupboards, damp walls owing to absence of dampcourse and defective rain spouting, cracked and dirty ceilings, broken floor bricks and dirty and insufficiently ventilated water closets; all the cottages, with one exception, had separate closets. The average rental was 3/6 a week.

SEWERAGE AND SEWAGE DISPOSAL.

Seven houses were newly connected with the sewers, 14 water closets were supplied with flushing boxes and one privy vault was abolished.

REFUSE DISPOSAL.

Up to the present time all refuse has been shot into empty sand pits, &c.; the objections to this method are the blowing about of dust in dry weather, and bad smells in wet weather, as well as the contamination of food by flies living on the refuse. The provision of a refuse destructor is recommended.

WATER SUPPLY.

Sixteen houses were newly connected with the mains.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 slaughter-house, 26 dairies, &c. (a decrease of 1), 3 bakehouses (a decrease of 1), 40 workshops and 1 outworker's premises, all of which were frequently inspected.

INFECTIOUS DISEASES.

Dr. Meyrick-Jones attributes the fact that only 7 cases of scarlet fever occurred as due greatly to the sandy soil, the efficient drains and the absence of overcrowding. Six of the 7 cases and all 3 cases of diphtheria were removed to the Isolation Hospital.

ISOLATION HOSPITAL.

The transference of the Delancey Hospital from the Trustees to the Local Sanitary Authorities was not finally settled.

Area 4,726 Acres. Assessable Value : £302,060. 1d. Rate : £1,258.

Population 1901	...	49,439
1911	...	48,942
Decrease 1901-11	...	497 (1.0%)
Estimated Population 1913	...	49,500

Medical Officer of Health ... J. H. Garrett, M.D., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURE: Lower Lias Clay with beds of sand over about half of the area of the town.

CHIEF INDUSTRIES: Residential town and important educational centre; domestic service, dress-making and tailoring, decorative carving in stone and wood.

HOUSING.

Eight hundred and seventy-four houses were inspected and 676 found to have defects on the average 3.4 defects per house. The chief defects were lack of sufficient light and ventilation, insufficient water supply, lack of proper closet accommodation, damp and dark rooms, lack of conveniences for decent living, *e.g.*, proper facilities for cooking and storing food, washing accommodation, &c., overcrowding and general dilapidations. Closing orders were issued for 9 houses, of which 4 were made fit for habitation. Sanitary certificates were issued for 42 houses, making a total of 1,028 since the commencement of this work.

SEWERAGE AND SEWAGE DISPOSAL.

The scheme for the re-sewering of the south-eastern district of the town, at a cost of about £18,000, has not yet been put into execution.

The disposal works which were estimated to cost £38,385 are now nearing completion.

WATER SUPPLY.

Considerable difficulty has been caused from time to time by a deterioration of the water by the growth in the reservoirs and pipes of *Chara Vulgaris* and *Crenothrix Polyspora*. An experiment showed that one part per million of copper sulphate was fatal to *Chara*, but it is questionable whether this is a very practical method of getting rid of it. Dr. Garrett, however, records the very interesting observation that while no *Chara* grew on smooth cement surfaces in the reservoir it flourished upon the rough brick; as the brick parts needed repair, the Committee decided to amend this condition and at the same time to try to stop the growth of the weed by covering the bottom and sides of the reservoir with a smooth cement concrete, and to mix the concrete with water containing one part of copper sulphate to 150,000 parts of water. The cost of lining one reservoir with a capacity of 14,000,000 gallons was about £1,000. If this proves successful, the fellow reservoir will be similarly treated.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 8 common lodging-houses (an increase of 1), 18 private slaughter-houses, 82 milkshops and farms, 354 workshops (an increase of 3) and 132 outworkers' premises (a decrease of 21). One lodging-house—formerly a public house—was newly registered. Of 6,891 carcasses inspected 15 (2 heifers and 13 pigs) were destroyed on account of tuberculosis in a generalized form; the interesting note is added that none of these were emaciated or even of bad quality. The bakehouses (9 of which are underground) were kept in a clean and satisfactory condition.

INFECTIOUS DISEASES.

The maximum number of cases since 1893—335—was recorded. The causes of the prevalence are discussed and, various factors having been excluded, it is stated that the cause of scarlet fever is a variable as well as a powerful in-

fluence; from time to time it assumes a vitality and infectiveness which it does not possess at another time and by virtue of this produces a greater number of cases. The type of the disease was mild, the 335 cases resulting in 4 deaths only, whereas the epidemic of unknown dimensions in 1876 produced a death roll of 96.

Forty-nine cases of diphtheria were notified, the exact average of the last 25 years. For about three months in the early part of the summer cases of sore throat, quite distinct from diphtheria, occurred, the number being estimated at about 300; it was associated with an easily demonstrable streptococcus which appeared in some cases to be capable of setting up a general septicæmia. The majority of the cases resulted in rapid and complete recovery whilst a few were more severely affected with enlarged cervical glands and a few were made dangerously ill with signs of toxæmia and endo-carditis (see also p. 37). At least 12 cases of acute polio-myelitis occurred, chiefly within a limited area in one quarter of the town; Dr. Garrett's observations on this outbreak and its lessons are given in an earlier section (see p. 27).

The number of cases of pulmonary tuberculosis notified, 135, was well up to the number anticipated; Dr. Garrett refers to the arrangements made in connection with the scheme for the treatment and prevention of tuberculosis, including the opening of the dispensary in Cheltenham, and concludes by saying that the grappling with this disease requires to be very close and systematic for any considerable good to result.

ISOLATION HOSPITAL.

The Trustees of the Delancey Hospital have applied to the Charity Commissioners to vary the deed of Trust and to transfer the management of the Hospital to the Cheltenham Corporation and Charlton Kings Urban and Cheltenham Rural District Councils; the decision of the Commissioners is awaited.

COUNTY POWERS OF LOCAL GOVERNMENT.

Dr. Garrett advocates the extension of the boundary of the town to include the populous parts of Charlton Kings and Prestbury, and application for the powers of a County Borough.

CIRENCESTER URBAN DISTRICT

89

Area 5,286 Acres. Assessable Value : £36,004. 1d. Rate : £150.

Population 1901	...	7,536
1911	...	7,631

Increase 1901-11	...	95 (1.3%)
------------------	-----	-----------

Estimated Population 1913	...	7,652
---------------------------	-----	-------

Medical Officer of Health: M. Ashley, M.B., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURE: Greater Oolite.

CHIEF INDUSTRIES: Residential and market town with brewery, flour mills, cast iron foundry and bacon factory.

This District was included in the East Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Ashley, the first officer, took over the duties in April, 1913.

HOUSING.

Twenty-nine houses were inspected during the year and all were found to have defects. The chief defects as regards housing are due to buildings being crowded together without sufficient space in front and rear: an instance in Coxwell Street is quoted where a block of 9 cottages—2 of which are now being demolished—stood on a total area of 85 feet by 43 feet. The problem is therefore difficult, as the only remedy in many cases is to demolish some and so make room for the others. Such drastic measures are necessarily slow but are being proceeded with, and 12 houses have been demolished voluntarily during the past year. Twenty-four houses were built by the District Council in 1912.

SEWERAGE AND SEWAGE DISPOSAL.

Practically the whole of the district is drained to broad irrigation works, with an area of about 200 acres, at South

Cerney: the effluent is discharged into the Churn. The method is apparently satisfactory; no complaints arose during 1913. A stoppage occurred in the School Lane sewer.

RIVERS POLLUTION.

There is not much pollution of the River Churn or of the Canal, and such as there is depends on the improper use of surface water drains for slop waters which is remedied as soon as discovered.

REFUSE DISPOSAL.

House refuse is removed twice weekly to a tip in an outlying part of the district; no complaints have been received, but the smoke from the burning refuse is often disagreeable in the neighbourhood of the Isolation Hospital, the nearest inhabited building.

WATER SUPPLY.

The source is a well in the Great Oolite, 267 feet deep: the water is pumped to a covered reservoir from which the town is constantly supplied. The daily supply varies between 80,000 and 110,000 gallons. The water is of a high degree of purity but somewhat hard. A gradually decreasing number of houses derive their water from shallow wells.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house (a decrease of 1), 6 slaughter-houses (a decrease of 1), 16 dairies, &c. (an increase of 1), 13 bakehouses and 54 workshops (an increase of 1). The slaughter-houses have all been in occupation for many years; they are usually found satisfactory, but complaints have arisen more particularly as to noises made by the animals.

INFECTIOUS DISEASES.

Twenty cases of scarlet fever were notified. In the early part of the year only a few sporadic cases occurred, but to-

wards the end 16 cases were notified. No doubt the spread of infection was due, in great measure, to the attendance at school in an infectious condition of 4 children who were at first supposed to have influenza. The number of cases of diphtheria (16) was unusually large for this district. There was a succession of cases, apparently connected with one of the schools, during the summer vacation, and evidence pointed to attendance at the school by an unrecognised case; as the school was closed systematic bacteriological examination for carriers was impossible.

ISOLATION HOSPITAL.

The accommodation for scarlet fever and diphtheria is unsatisfactory for reasons mentioned in previous reports, and the question of improving matters is now under consideration. A tent was used during 1913 to give increased accommodation. The Medical Officer of Health is now the Medical Superintendent.

The cottage at South Cerney is still kept for small-pox patients in case of emergency, but it is small and too close to the public highway for the purpose.

Area 2,060 Acres. Assessable Value : £6,468. 1d. Rate : £27.

Population 1901	...	2,541
1911	...	2,604
Increase 1901-11	...	63 (2.5%)
Estimated Population 1913	...	2,604

Medical Officer of Health ... J. R. Payne, M.R.C.S.

CHIEF GEOLOGICAL SUBSTRUCTURE: Coal Measures.

CHIEF INDUSTRIES: Coal and iron mining, quarrying and agriculture.

HOUSING.

Two hundred and twenty houses were inspected and 127 found to have defects, some of which are detailed: they were all remedied. The older houses are of stone, but some of the newer houses are built of brick. The housing accommodation is under consideration and it has been decided to call a meeting of the ratepayers.

SEWERAGE AND SEWAGE DISPOSAL.

The sewerage is in a very serious condition and is a danger and a menace to the health of the town. A scheme should be prepared and proceeded with systematically as soon as there is sufficient water to flush the sewers. The bucket closets are cleared twice weekly by the scavenger; in outlying localities use is made of privy middens.

RIVERS POLLUTION.

The brook acts as the sewer and runs under houses for a considerable distance; a considerable length was quite dry for some weeks and it was necessary to flush it with large quantities of disinfectants.

REFUSE DISPOSAL.

House refuse is removed twice a week by the scavenger.

WATER SUPPLY.

There is often a great deficiency in the public supply during the summer months and the pressure is never very great. Only the low-lying houses have water laid on; for the remainder in the town water has to be carried from standpipes. The districts outside the town itself depend on private wells and reservoirs.

It is said that there seems every promise of a plentiful supply in the Mill Pound Pit, and application has been made for a loan of £200 to clean out the pit. Consideration must be given to the pumping of the water and its storage at a higher level to supply the whole locality.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house, 3 slaughter-houses (a decrease of 1), 19 dairies, &c. (an increase of 2), 9 bake-houses (a decrease of 2) and 31 workshops. These were all inspected on several occasions, the lodging-house twice weekly by the Sanitary Inspector and monthly by the Medical Officer of Health.

INFECTIOUS DISEASES.

Six cases were notified, including 2 of diphtheria and 1 of scarlet fever.

ISOLATION HOSPITAL.

There is no isolation hospital and no public disinfectory.

SCHOOLS.

There are 3 public elementary schools. Neither has any supply of water, which has to be fetched as required.

Area 1,530 Acres. Assessable Value : £31,092. 1d. Rate : £129.

Population 1901	...	11,961
1911	...	12,700
Increase 1901-11	...	739 (6.2%)
Estimated Population 1913	...	12,980

Medical Officer of Health ... C. J. Perrott, L.R.C.P., I.

CHIEF GEOLOGICAL SUBSTRUCTURE: Coal Measures.

CHIEF INDUSTRIES: Entirely working-class population—boot making, stay making, motor bicycle manufacture and coal mining (one colliery in south of district).

HOUSING.

Only the worst houses have been inspected. The number in 1913 was 17, most of which were placed in habitable repair: it is thought that these inspections have an indirect effect on neighbouring owners, who put their houses in order. There is an increasing demand for houses, owing to the development of the cycle works; previously the supply was greater than the demand.

SEWERAGE AND SEWAGE DISPOSAL.

Sixty-eight houses were newly connected with the sewers; there are 1674 hand-flushed closets, 14 being supplied with flushing cisterns during 1913. Forty-five privy vaults were abolished but 732 are still in use.

At the Conham Outfall Works Stoddart's Fixed Distributors were replaced by two of Adams' Rotary Distributors; at the Warmley Works Ham, Baker & Co.'s Rectangular Distributors are used. The effluent from both works is satisfactory.

WATER SUPPLY.

During a small portion of October and November the supply was intermittent owing to the exceptionally low rainfall and a breakdown at the pumping station. The Company are laying down a new softening plant and are duplicating the pumps and machinery at the California Reserve Station, which will give an additional service main to Kingswood High Level. They are also promoting a Bill in Parliament to supplement their supply from a new source at Shipton Moyne and will lay down new mains to the centre of the district; the new supply will not require softening. Twelve new houses were connected with the mains.

There are 47 houses at Spring Hill, Bush's Level and Station Road not connected; the two latter parts are dependent on the level running from a coal mine about a mile distant, covered for the greater part but exposed on the lower side and open to pollution. An extension of the mains to these parts is desirable.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 13 slaughter-houses (a decrease of 24), 38 dairies, &c. (an increase of 6), 25 bakehouses (a decrease of 1) and 754 workshops and outworkers' premises (a decrease of 62). Seventeen carcasses and parts, and 3 consignments of fish were either seized or surrendered. The reduction in the number of outworkers' premises for boot making, though trade was good, is regarded with satisfaction.

INFECTIOUS DISEASES.

There were increased numbers of cases both of scarlet fever and diphtheria. The former disease was of a very mild type; it is thought that the use of eucalyptus oil was a great help in preventing the spread. The epidemic of diphtheria in Hanham started in November, 1912, and continued through the first four months of 1913. The school

children were examined by Dr. Perrott and by Dr. Deborah Hancock (School Medical Inspector) and some 622 swabs taken; 70 children were thus found to be infected. A temporary Dispensary was opened in the centre of Hanham and 164 children—68 with Klebs-Loeffler bacilli and 96 with Hoffman's bacilli—were treated daily. These children included 20 nasal and 2 aural cases. No children were allowed to return until a negative swab had been obtained, and when the Dispensary was closed on the 30th April, after being open for 9 weeks, there were only 3 outstanding cases with Hoffman bacilli, all 3 residing in Bristol. The total number of cases notified in connection with this outbreak was 65.

The case notified as enteric fever afterwards proved to be tuberculosis.

Of the 32 cases of pulmonary tuberculosis 8 were sent to the Sanatorium. A Dispensary has been opened at Warmley and arrangements made by the County Council for bacteriological examinations. Four shelters have been provided, and spitting flasks, handkerchiefs and disinfectants are supplied and houses and flasks disinfected by the District Council.

ISOLATION HOSPITAL.

Arrangements have been made with the Warmley Rural District Council for the use of a minimum of 8 beds in their Hospital, and for the Small-pox Hospital of the Urban District Council to be shared by the two Authorities. A twelve months' trial will show whether or not the arrangement is satisfactory.

BYE-LAWS.

The building bye-laws have been revised.

Area 1,596 Acres. Assessable Value : £10,552. 1d. Rate : £44.

Population 1901 ... 3,028

1911 ... 3,031

Increase 1901-11 ... 3 (.1%)

Estimated Population 1913 ... 3,031

Medical Officer of Health ... R. Green, M.D., D.Hy.

CHIEF GEOLOGICAL SUBSTRUCTURES: Upper Lias to Great Oolite.

CHIEF INDUSTRIES: Market town with leather board works, flock mill, stick works, bacon factory and corn mill.

HOUSING.

Seventy-six houses were inspected and 19 found to have defects. A larger number of houses than usual (10) was built. The question of erecting houses has been under consideration by the Council who deferred the matter till the new Council should come into office.

SEWERAGE AND SEWAGE DISPOSAL.

Fifty-six houses were newly connected making a total of 309 of the total 774 houses; a number are not near a sewer.

RIVERS POLLUTION.

The streams receive the washings from certain works and factories; at the leather board factory extensive apparatus for purifying the effluent has been laid down, and is a good example to other works. From an inspection of the stream in the centre of the town it was found that there was considerable pollution from sewage and privies.

REFUSE DISPOSAL.

House refuse is collected by a contractor and is tipped in a disused quarry. No complaints were received. Sanitary ash bins should be used.

WATER SUPPLY.

The bulk of the district is supplied by the Stroud Water Company; other sources are springs and surface wells both of which are naturally liable to pollution. Though the summer was a dry one there was no marked shortage of water. A new service reservoir is being constructed by the Stroud Water Company at Forest Green.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 7 slaughter-houses (a decrease of 1), 9 dairies, &c. (an increase of 1), 4 bakehouses, 38 workshops (a decrease of 1) and 5 outworkers' premises (a decrease of 2). The fellmongery which was opened in 1909 and closed in 1912 was re-opened during 1913; it is carried on in a cleanly way but the washings go direct to the stream. The bakehouses and slaughter-houses are well kept and cleanly. The average milkman is deterred from cooling his milk owing to the popular fallacy that milk is not fresh unless it feels warm; all milk should be strained and cooled and the cows should be kept clean.

INFECTIOUS DISEASES.

Only 19 cases were notified and of these 8 were cases of tuberculosis, the other cases were 8 of scarlet fever, 2 of diphtheria and 1 of typhoid fever. The last was an elderly man who died: it was not possible to trace any source of infection. Six of the cases of scarlet fever and both of diphtheria were treated in the hospital: special visits were paid to the schools and examinations made for contacts on several occasions.

All 7 cases of pulmonary tuberculosis were treated at the Sanatorium for periods of about three months. Reference is

made to the advantages of the Dispensary in the detection of early cases, and to the importance of early treatment.

ISOLATION HOSPITAL.

The Hospital is well staffed and commodious. Provision is being made for the isolation of advanced cases of pulmonary tuberculosis.

BACTERIOLOGICAL EXAMINATIONS.

The medical men are fully alive to the advantages.

HEALTH VISITOR.

A proposal to appoint a Joint Health Visitor and School Nurse was brought forward, but no action was taken.

Area 1,937 Acres. Assessable Value : £8,988. 1d. Rate : £37.

Population 1901 ... 1,184

1911 ... 1,021

Decrease 1901-11 ... 163 (13.8%)

Estimated Population 1913 ... 985

Medical Officer of Health :

O. W. Andrews, M.B., D.P.H., Deputy Surgeon-General R.N.

CHIEF GEOLOGICAL SUBSTRUCTURE: Keuper Marl.

CHIEF INDUSTRIES:—Agricultural and residential.

This District was included in the West Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Andrews, the first officer, took over the duties at the end of July, 1913.

HOUSING.

Forty-five houses were inspected and 30 found to have defects, 21 of which were remedied.

SEWERAGE AND SEWAGE DISPOSAL.

The number of houses where there are hand-flushed closets is very limited, and at ordinary times, when there is no shortage of water, the drainage and sewerage of the town is quite satisfactory.

WATER SUPPLY.

The proprietary supply has not given the same satisfaction as in previous years. During the prolonged drought Newnham suffered from the enforced limitation of the supply; even during the winter it has at times been necessary to limit the

supply owing to there being leakages from the pipes into the Severn. Improved storage is required.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 2 slaughter-houses, 10 dairies, &c., 3 bake-houses and 14 workshops, which have all been frequently inspected; 1 cowyard was improved.

INFECTIOUS DISEASES.

Ten cases were notified; of the 6 cases of scarlet fever 2 were removed to hospital.

ISOLATION HOSPITAL.

This district is served by the Joint Isolation Hospital at Green Bottom, Littledean.

102 STOW-ON-THE-WOLD URBAN DISTRICT

Area 45 Acres. Assessable Value : £3,452. 1d. Rate : £14.

Population 1901 ... 1,386

1911 ... 1,301

Decrease 1901-11 ... 85 (6.1%)

Estimated Population 1913 ... 1,301

Medical Officer of Health ... E. Dening, M.R.C.S.

CHIEF GEOLOGICAL SUBSTRUCTURE: Great Oolite.

CHIEF INDUSTRIES: Agriculture; masons and carpenters.

HOUSING.

Seventy-nine houses were inspected and 21 found to have defects all of which were remedied on informal notice. No house was unfit for habitation and no case of overcrowding was reported. The chief defects are bad roofs and windows not opening. There is no room for building but it is thought that, if the area were enlarged, houses would be built.

SEWERAGE AND SEWAGE DISPOSAL.

The only sewer is one which was laid to drain the houses near the water works and which is discharged into a cesspit 40 yards distant. There are 94 water closets, 145 privies and 14 pail closets; the water closets drain to cesspits generally some distance from the house, but each one on its own premises or garden.

REFUSE DISPOSAL.

Refuse is collected every Saturday and tipped in a quarry at the workhouse in the Rural District. The annual cost is £15 12s. which cannot be considered a large sum to pay for such a useful service.

WATER SUPPLY.

The water supply has been exceedingly good and the analysis has not varied from that of previous years. It would be a great advantage if the water was laid on to each house, as at present half have to obtain their supply from the public standpipes.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 2 slaughter-houses, 3 dairies, &c., 2 bake-houses and 14 workshops. The slaughter-houses are well flushed and clean, the dairies are kept in a sanitary condition and the bakehouses are in good order.

INFECTIOUS DISEASES.

There was a severe epidemic of scarlet fever resulting in 14 cases. The teachers were very helpful in sending suspicious cases to Dr. Denning; in some cases the suspicions were groundless but in several the children were suffering from preliminary signs. The danger comes chiefly from mild cases for which no advice is sought. Three cases of pulmonary tuberculosis were notified; 2 proved fatal, one of them imported and dying a fortnight after arrival. The remaining cases are 2 in number.

ISOLATION HOSPITAL.

Isolation in a small cottage is most difficult and one can only hope to keep infection from the neighbouring houses. Dr. Denning still considers this small district might share the advantages of a combination with other Councils; in 1913 the need of a hospital was felt, and had it been possible to send away the first few cases of scarlet fever, the epidemic might have been promptly stopped.

INFANTILE MORTALITY.

Five infants died under the age of 1 year, an infantile mortality of 263. This figure is extremely high, but 2 of the 5 infants were premature twins born in the district where the mother was staying for a few days.

Area 1,168 Acres. Assessable Value : £35,772. 1d. Rate : £149.

Population 1901 ... 9,153

1911 ... 8,767

Decrease 1901-11 ... 386 (4.2%)

Estimated Population 1913 ... 8,767

Medical Officer of Health ... R. Green, M.D., D.Hy.

CHIEF GEOLOGICAL SUBSTRUCTURES: Middle Lias to Inferior Oolite.

CHIEF INDUSTRIES: Centre of West of England cloth manufacture, ready-made clothing factories, breweries, &c.

HOUSING.

There was little change from former years. The prevalence of infectious diseases somewhat retarded systematic inspection but 123 houses were examined and 42 were found to have defects and 10 to be unfit for habitation; 4 houses were closed. A most serious defect is that the windows of the living rooms in many of the old houses do not open. There is a shortage of houses at low rents; the Council are prepared to go on with a scheme if it can be done economically and without any charge on the rates.

SEWERAGE AND SEWAGE DISPOSAL.

It is unfortunate that an arrangement with the neighbouring Council cannot be come to in regard to the drainage of houses in Bowbridge and Paganhill which are still not connected to the sewer. Eighteen water closets were supplied with flushing arrangements but there are a still a great many that are hand-flushed.

The new disposal works will be finished in the course of a few months and will be a great improvement on the old system.

RIVERS POLLUTION.

The streams receive trade washings both within and without the district and are in consequence dirty and discoloured.

REFUSE DISPOSAL.

The refuse destructor is now in full going order and is a great improvement on the old system. Covered sanitary ash bins should be used by householders.

WATER SUPPLY.

There are two sources—one at the top of the hill, a surface supply with large service reservoirs, and the other from Gainey's Well in the lower part of the town; during the shortage in the autumn water was procured from the Stroud Water Company under the standing arrangement. The water was reported on favourably by the County Analyst; it would be a distinct advantage if the water could be softened.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 5 common lodging-houses, 9 slaughter-houses, 22 dairies, &c., 14 bakehouses (a decrease of 3), 83 workshops (a decrease of 5), 22 premises of outworkers (a decrease of 88) and 2 tripe boilers' establishments. The lodging-houses are licensed for 105 persons: the ample provision is thought to account in some measure for the number of persons soliciting alms. One of the houses has been much improved. The improper storage and sale of milk at small shops is regarded by the Sanitary Inspector as a great evil.

INFECTIOUS DISEASES.

There was an increased prevalence of scarlet fever and a decreased incidence of diphtheria. All the 32 cases of scarlet

fever and 12 of the 15 cases of diphtheria were removed to hospital. Seven of the 10 school cases of diphtheria occurred at Uplands and the school was closed in March for two weeks. Frequent visits were paid to the school: all the infants and the children in the lower standards were swabbed, and a considerable number of carriers were found. Of the 27 cases of pulmonary tuberculosis 9 were treated in the Sanatorium; in 10 instances it was found that the cases were not occupying separate bedrooms at home. Contacts and doubtful cases are sent to the Tuberculosis Dispensary.

ISOLATION HOSPITAL.

The hospital accommodation is ample and the institutions are well equipped. Arrangements are being made for the erection of a tuberculosis block.

SCHOOLS.

Most of the 7 schools are situated high up in healthy positions; water carriage is in vogue but trough closets, easily fouled, are in general use.

HEALTH VISITOR.

The general principle of the appointment of a Health Visitor for this and the two associated districts has been approved, but so far little progress has been made.

Area 114 Acres. Assessable Value: £5,636. 1d. Rate: £24.

Population 1901	...	1,989
1911	...	1,758

Decrease 1901-11	...	231 (11.6%)
------------------	-----	-------------

Estimated Population 1913	...	1,712
---------------------------	-----	-------

Medical Officer of Health: M. Ashley, M.B., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURE: Greater Oolite.

CHIEF INDUSTRIES: Market town: brewing.

This District was included in the East Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Ashley, the first officer, took over the duties in April, 1913.

HOUSING.

There is a considerable number of bad houses, especially in Charlton Road, Harper Street, Cotton's Lane and the Chipping. In the first-mentioned road the houses are unconnected with the sewers, and the closet accommodation consists of privies. In all the roads there are houses unfit for human habitation and a number that could not be made fit without a greater outlay than they are worth. The defects in these houses are largely due to their great age, and their insufficient accommodation: the floors are decayed with age, rooms are unceiled, they are often dark and ill-ventilated, in some cases the soil is banked against the houses, causing dampness, paving is often deficient, in many cases round gully traps, and in addition to these defects are general dilapidations, such as leaky roofs, &c.

The average number of persons per inhabited house decreased from 4.38 in 1901 to 3.95 in 1911, and there were 40 uninhabited houses at both censuses.

SEWERAGE AND SEWAGE DISPOSAL.

The town is sewered to a system of settling tanks and filter beds and the effluent is discharged into the river Avon. A group of houses in Charlton Road is still unconnected with the sewers; a scheme for connecting them was prepared but has been postponed in view of expense to be incurred in connection with the water supply.

RIVERS POLLUTION.

The only pollution of the River Avon is caused by surface washing from the roads.

REFUSE DISPOSAL.

The district is scavenged twice weekly by an arrangement with a contractor.

WATER SUPPLY.

The present source is a well in the Great Oolite about 300 feet deep; in the driest period of the year the water available by pumping was reduced from 1,400 gallons per hour to 600 gallons per hour and then an intermittent supply only is possible. Anxiety has been caused for some time past and, with the object of obtaining a better supply, application has been made for a loan of £795 for preliminary expenses in connection with sinking a well on a fresh site.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 2 common lodging-houses, 2 slaughter-houses (1 licensed annually), 1 dairy (a decrease of 1), 5 bakehouses and 32 workshops (an increase of 4). The common lodging-houses are very old adapted dwellings and not altogether suitable: they are gradually being improved by alterations. Most

of the milk is delivered direct from carts coming from farms in the Rural District.

INFECTIOUS DISEASES.

The only cases notified during the year were 1 of erysipelas and 4 of pulmonary tuberculosis.

ISOLATION HOSPITAL.

There is no Isolation Hospital.

Area 2,532 Acres. Assessable Value : £22,664. 1d. Rate : £94.

Population 1901	...	5,419
1911	...	5,287
Decrease 1901-11	...	132 (2.4%)
Estimated Population 1913	...	5,260

Medical Officer of Health: A. Fowell-Turner, L.R.C.P. Ed.

CHIEF GEOLOGICAL SUBSTRUCTURES: Keuper Marl, Lower Lias and Alluvium.

CHIEF INDUSTRIES: Flour mills, collar and shirt factory, builders' yards and agriculture.

HOUSING.

Ninety houses were inspected and 36 found to have defects of which 31 were remedied. At the present rate it is said that it will take over 9 more years to complete the systematic inspection. The alterations required by the Council are insufficiently drastic to effect any really substantial improvement, as free circulation of air and proper ventilation in crowded areas can be attained only by demolition of houses. The other chief defects are dampness and want of cleanliness. The present unsatisfactory conditions can only be remedied by building new and suitable houses; an application has been made for a loan of £5,800 to build 30 houses.

SEWERAGE AND SEWAGE DISPOSAL.

There is water carriage throughout the town and cesspools only in outlying parts. The policy of re-laying the sewers has been maintained, Mill Lane and Mill Bank being dealt with during 1913.

RIVERS POLLUTION.

No pollution occurred during the year.

REFUSE DISPOSAL.

Collection was as usual carried out thoroughly and there were no complaints of want of frequency.

WATER SUPPLY.

The supply was drawn from two sources—the Cheltenham Reservoirs and the River Severn. The supply is constant and there are no storage cisterns; the water from both supplies was very satisfactory. Wells, the water from which is found to be unfit for drinking, have been condemned.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house (a decrease of 1), 5 slaughter-houses (a decrease of 1), 13 dairies, &c. (a decrease of 4), 12 bakehouses (an increase of 1) and 53 workshops (an increase of 11). These are reported to be regularly inspected and to be satisfactorily conducted.

INFECTIOUS DISEASES.

Only 2 cases of scarlet fever and 1 case of enteric fever (a tramp) in addition to 8 cases of pulmonary tuberculosis and 1 of tubercular meningitis were notified, but measles, whooping cough and chicken-pox were prevalent.

ISOLATION HOSPITAL.

The Joint Hospital is now open; it consists of an administrative block (5 new bedrooms), pavilions for scarlet fever (14 beds) and diphtheria (4 beds), block of single wards (4 beds), and new discharging and laundry blocks with steam disinfectors. Electric lighting is advised. The Hospital is described as thoroughly up-to-date.

INFANTILE MORTALITY.

It is very disappointing to find a sudden rise in the infantile mortality to 145 per 1,000 births, the highest rate ever reached; 3 of the 16 deaths were due to measles, and 1 to whooping

cough. It is hoped this rate is only due to exceptional circumstances.

BYE-LAWS.

New building bye-laws have been prepared and submitted to the Local Government Board.

WESTBURY-ON-SEVERN URBAN DISTRICT 113

Area 8,257 Acres. Assessable Value : £17,448. 1d. Rate: £73.

Population 1901	...	1,866
1911	...	1,812
Decrease 1901-11	...	54 (2.9%)
Estimated Population 1913	...	1,803

Medical Officer of Health:

O. W. Andrews, M.B., D.P.H., Deputy Surgeon-General R.N.

CHIEF GEOLOGICAL SUBSTRUCTURES: Keuper Marl and Lower Lias.

CHIEF INDUSTRY: Agriculture.

This District was included in the West Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Andrews, the first officer, took over the duties at the end of July, 1913.

HOUSING.

Fifty-six houses were inspected and 40 found to have defects; in 29 cases the houses were placed in a proper state of repair and one house was closed voluntarily.

SEWERAGE AND SEWAGE DISPOSAL.

Eighteen privy vaults were abolished and 18 improved privies were provided.

WATER SUPPLY.

Wells were sunk or other improved sources of supply provided in 3 cases.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 2 slaughter-houses (an increase of 1), 20 dairies, &c. (a decrease of 1), 6 bakehouses (a decrease of 1) and 5 workshops. They were all frequently inspected; nothing occurred worthy of note.

INFECTIOUS DISEASES.

Nine cases, including 3 of scarlet fever and 5 of pulmonary tuberculosis, were notified: all cases were treated and isolated in their homes.

ISOLATION HOSPITAL.

This district is served by the Joint Isolation Hospital at Green Bottom, Littledean.

Area 23,726 Acres. Assessable Value : £31,912. 1d. Rate : £133.

Population 1901	...	5,441
1911	...	5,597
Increase 1901-11	...	156 (2.9%)
Estimated Population 1913	...	5,630

Medical Officer of Health ... G. Findlay, M.A., M.B.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias to Inferior Oolite.

CHIEF INDUSTRIES: Entirely agricultural: market gardening at Mickleton.

HOUSING.

Two hundred and forty houses at Campden (including Broad Campden), Lemington and Mickleton were inspected and 196 found to have defects, the chief of which were defective pantry accommodation and living room windows not opening. There is deficiency of cottages at Campden, Moreton-in-the-Marsh and Quinton: Committees have been appointed to consider the matter and it is hoped that 10-12 cottages will soon be erected at Moreton-in-the-Marsh. Magdalen College has built 5 cottages at Quinton and two old cottages have been re-built; there are still tenants in 2 condemned houses because no other accommodation can be found. The 4 cottages erected by the Council at Mickleton are occupied and paying their way at a rental of 3s. 4d. per week.

SEWERAGE AND SEWAGE DISPOSAL.

BOURTON-ON-THE-HILL.—The improvements appear to be satisfactory; no further complaint has been received from the Thames Conservators.

CAMPDEN.—The sewers are still in the same condition. On receipt of a letter from the Local Government Board the matter has been put on the agenda of a future meeting.

MORETON-IN-THE-MARSH.—The new sewer has been completed and houses are being connected. The old sewer brook has been cleaned out at considerable expense.

All the sewer ditches in the district have been cleaned out.

REFUSE DISPOSAL.

Scavenging would be beneficial at Campden and Moreton. Often heaps of refuse are found close to houses and form breeding-places for flies which often contaminate milk and other food.

WATER SUPPLY.

BOURTON-ON-THE-HILL.—The supply of water at the fountain opposite Bourton House is private property, and Dr. Findlay is unable to suggest any scheme by which the water supply can be improved except at prohibitive expense.

CAMPDEN.—As one of the springs was contaminated after rain, on the advice of the Local Government Board the farm-yard above was concreted and other arrangements made. It is hoped this work will allow all the springs to be used. Two hundred and twenty-four houses are now supplied.

MORETON-IN-THE-MARSH.—There were several complaints of shortness at Donnington owing to the man not keeping the reservoir full. The machinery has been thoroughly overhauled. The average daily supply increased from 14,000 gallons in 1911 to 15,800 in 1912 and 17,000 in 1913. Practically all the houses are connected.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 6 slaughter-houses, 29 dairies, &c. (an increase of 1), 15 bakehouses and 77 workshops (an increase of

1): they were all inspected and the conditions are described as fairly good. There are 325 cows,—kept in the open for the greater part of the year; a considerable quantity of milk is exported. The fat-boiling premises at Moreton-in-the-Marsh are comparatively clean and there were no complaints of nuisance.

INFECTIOUS DISEASES.

Scarlet fever was less prevalent, 10 cases only being notified, 7 in Moreton-in-the-Marsh. Of the 13 cases of diphtheria 7 occurred at Quinton: the school children were examined by Dr. Findlay and Dr. Blake (School Medical Inspector) but only two suspicious cases were found and the outbreak ended. The depôts for the supply of antitoxin at Campden and Moreton prove useful. Two cases of polio-myelitis were notified; the only thing in common was that both children had access to poultry in pens.

There are now 13 known cases of pulmonary tuberculosis, 3 of which have been sent to the Sanatorium, while another has had a shelter lent to him privately.

ISOLATION HOSPITAL.

There is no Isolation Hospital and there does not appear to be much hope of arranging with neighbouring Councils to take cases.

The cottage at Todenham in which the furniture, &c., for the small-pox tents was stored has fallen into disrepair and the caretaker did not do his duty properly. Notice has been given to the landlord and a suitable house has been found at Lapstone.

SCHOOLS.

The water supply and sanitary arrangements of the 12 schools are fairly satisfactory. Extensive improvements have been made at the Campden Church of England Infants' School.

The returns of infections sent by Head Teachers are frequently useful.

BYE-LAWS.

Powers have been obtained but no bye-laws have been adopted. They would be very useful at Campden and Moreton.

Area 18,401 Acres. Assessable Value : £37,216. 1d. Rate : £155.

Population 1901	...	4,637
1911	...	5,254
Increase 1901-11	...	617 (13.3%)
Estimated Population 1913	...	5,350

Medical Officer of Health ... J. F. Johns, M.D., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias to Inferior Oolite.

CHIEF INDUSTRIES: Agriculture; residential neighbourhood.

HOUSING.

The house to house inspection will shortly be completed. Seventy-one houses in Swindon and Shurdington were inspected and 56 found to have defects of which 48 were remedied. There is no especial dearth of labourers' cottages, though possibly there is deficiency at Shurdington but no special demand. Overcrowding may be said not to exist.

SEWERAGE AND SEWAGE DISPOSAL.

PRESTBURY.—Improvement has been effected by the completion of the scheme for the relief of the flooding of the sewers. The disposal plant is sufficient for present and future requirements.

SHURDINGTON.—The works are also sufficient and effective.

In unsewered parts movable receptacles for excrement are increasing in number, but earth closets are, unhappily, not in the favour that their many advantages merit.

RIVERS POLLUTION.

The disposal of sewage by broad irrigation on a clay subsoil, liable to become water logged in times of heavy rainfall, renders pollution of streams likely to occur: the installation of the Borough Sewage Works, at Hayden, will probably tend to lessen and prevent such possibilities in future.

Pollution of roadside ditches must necessarily occur spasmodically where overflow of cesspools results from want of attention.

REFUSE DISPOSAL.

Scavenging is needed in the more populated parishes.

WATER SUPPLY.

In 7 parishes about three-quarters of the population are supplied from the mains of the Corporation. There are privately-owned supplies in Cowley, Little Shurdington, Leckhampton and Great Witcombe, and public supplies also in Badgeworth, Cowley and Great Witcombe. The average piped supply is adequate and good, and certain further areas could be easily supplied with piped service at a cost that would not be prohibitive. Shortage has occurred in dry seasons in parishes supplied by wells—Little Witcombe, Crickley, Benthams, Bamfurlong and Staverton—all of which are not above suspicion.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 slaughter-house, 31 dairies, &c. (a decrease of 3) and 4 bakehouses. All the dairies and cowsheds are in a satisfactory state; the discontinuance of the inspections by the Veterinary Surgeon is a retrograde step.

INFECTIOUS DISEASES.

The usual mild outbreaks of scarlet fever and whooping cough occurred, but there was no epidemic of any severity. Twelve cases of tubercular disease were notified; certificates

with regard to these cases are received in confusing multiplicity, but at present the supervision of the cases is the most unsatisfactory part of the Health Officer's routine. Some disinfection by formalin is carried out where necessary.

ISOLATION HOSPITAL.

The Delancey Hospital affords every accommodation.

SANITARY INSPECTION.

Advantage results from the duties of Building Surveyor and Inspector of Nuisances being performed by one individual.

Area 69,736 Acres. Assessable Value: £113,192. 1d. Rate: £472.

Population 1901	...	22,104
1911	...	20,955

Decrease 1901-11	...	1,149 (5.2%)
------------------	-----	--------------

Estimated Population 1913	...	20,685
---------------------------	-----	--------

Medical Officer of Health: T. Rhind, M.R.C.S., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURES: Coal Measures and Lower Lias Clay.

CHIEF INDUSTRIES: Mainly agricultural, with collieries on the borders of Bristol, and tailoring home work by women in Winterbourne and Frampton Cotterell.

This District was included in the South Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Rhind, the first officer, took over the duties on the 1st February, 1913.

He attributes the decrease in the population to steady emigration of agricultural labourers and not to any sudden exodus.

HOUSING.

Four hundred and ninety-one houses in various parishes were inspected and 175 were found to be defective; as a rule no difficulty is found in getting the recommendations carried out, and these numbered 160. There is serious overcrowding in this district, and it was too frequently found that young adults of both sexes were compelled to sleep in the same bedroom or in the bedroom of their parents. The chief defects are insufficient closet accommodation, defective drainage, defective, or absence of, guttering and down pipes, defective

ventilation, dampness, deficient paving and absence of sinks and facilities for washing and for food storage. Various parts of the district were inspected by one of the Inspectors of the Local Government Board and housing schemes were recommended for 6 parishes. The District Council obtained the views of the Parish Councils concerned, and two—Frampton Cotterell and Wick—replied they considered that further accommodation was required. Dr. Rhind says that a scheme is more or less in preparation for Frampton Cotterell. Improved housing accommodation is one of the chief sanitary requirements.

SEWERAGE AND SEWAGE DISPOSAL.

The sewers at Filton and Wickwar were extended. The pumping station at the former is working satisfactorily; a new sprinkler was provided for one of the filters at Wickwar, and the works were satisfactory when Dr. Rhind inspected them last.

The closets in the district are mostly privy vaults, but every effort is being made to replace these by dry earth pail closets.

RIVERS POLLUTION.

A special report was made by Dr. Rhind upon the drainage of Old Sodbury, Chipping Sodbury, Yate, Iron Acton, Frampton Cotterell and Winterbourne, from which places there appeared to be evidence that there was pollution of the Frome brook. He concludes by saying, "I have examined this brook practically from its source till it leaves your district and, except from a few isolated points where the sewage gets direct into it, I found no evidence of serious contamination in spite of the fact that there was a small body of water flowing at the time of inspection; nowhere along its course could I detect any offensive smell." He now reports that the drainage of six houses that runs direct into the brook will receive attention and submits two analyses of the brook water taken

at two points with the report of the County Analyst thereon, concluding "I fail to find evidence of sewage pollution, and "am of opinion that the sample agrees in character with the "water usually found in a stream flowing through pasture "land."

REFUSE DISPOSAL.

There is no system of public scavenging in this district. Dr. Rhind would like to see this important sanitary necessity carried out in all parts of it.

WATER SUPPLY.

The population is dependent on wells for its water supply. The West Gloucestershire Water Company supply a large part of the district with a constant supply and every opportunity is taken to get it laid on to houses whenever doubt arises as to the wholesomeness of their present supply. Twenty-six houses were connected during 1913, and an extension of the mains to Westerleigh has been agreed upon, the agents of the Manor Park Estate generously offering one-third of the cost or not less than £500. The Company are applying for powers to extend their limits of supply.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house, 20 slaughter-houses, 135 dairies, &c. (an increase of 4), 40 bakehouses (a decrease of 3) and 126 workshops. The number of outworkers continues to decrease: they numbered 400 in 1906 and were reduced to 112 in 1913 and 96 in 1914. The slaughter-houses are found to be kept in a clean and satisfactory condition.

INFECTIOUS DISEASES.

The unusual amount of scarlet fever in the County Boroughs of Bristol and Gloucester has no doubt re-acted upon this district, and there was an increase from 27 cases in 1912 to

87 in 1913. The bulk of the cases fell upon Marshfield, viz., 51. The outbreak, although of a very mild type, undoubtedly arose through cases not being recognised by parents and the children returning to school in an infectious state after a few days' illness: leaflets were distributed and the outbreak necessitated the closure of the schools for 3 months.

Diphtheria showed a marked decline from 46 cases in 1912 to 34 in 1913. Dr. Rhind gives an interesting note on his work at the schools searching for carriers, in the course of which he took over 200 swabs, and refers to the arrangement made by the County Council for free bacteriological examinations as being of the utmost value.

ISOLATION HOSPITAL.

There is a hospital on Sodbury Common to which 17 of the 34 cases of diphtheria and 1 of the 87 cases of scarlet fever were removed.

Area 80,991 Acres. Assessable Value: £58,772. 1d. Rate: £245.

Population 1901	...	12,084
1911	...	12,746
Increase 1901-11	...	662 (5.5%)
Estimated Population 1913	...	12,880

Medical Officer of Health: M. Ashley, M.B., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURES: Forest Marble, Great Oolite and Oxford Clay.

CHIEF INDUSTRIES: Agriculture, especially sheep breeding and production of milk.

This District was included in the East Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Ashley, the first officer, took over the duties in April, 1913.

HOUSING.

Eighty-four houses were inspected, 69 of which were found to have defects. The inspection of the 87 houses in Ampney Crucis was completed during the year and particulars are given in this report; some of the older cottages need considerable alteration to bring them up to a good standard.

The proportion of tenements in this district with more than two occupants per room is high; they contain 7.9% of the population. Five representations were made with a view to closing orders, but the orders were not made as the tenants were old people and would have gone to the workhouse; the cottages will be kept in fair habitable condition and will probably be demolished at the termination of the present tenancies. Twelve new working-class dwellings were erected by

private enterprise and many cottages are being overhauled and repaired.

SEWERAGE AND SEWAGE DISPOSAL.

There are systems of sewerage in only six of the 36 parishes in the district. A new sewer was laid in Fairford to obviate the overflow of sewage to the Thames in wet weather, and a new drain and settling tanks in Preston to prevent similar trouble in connection with the Churn. In some parishes slop drains have been connected with old highway drains, but no complaint of nuisance therefrom arose during the year.

RIVERS POLLUTION.

It is said that there is not much pollution as the district is under the supervision of the Thames Conservators, as the result of whose action the work abovementioned at Fairford and Preston was undertaken.

REFUSE DISPOSAL.

No scavenging is carried out by the Council. Complaint has been received of unpleasantness caused by a public refuse heap at Stratton very near the main road; public scavenging was discussed but was not proceeded with.

WATER SUPPLY.

Twenty of the 36 parishes have a piped supply, for which landowners are chiefly responsible: in 6 the water supply is stated to be inadequate in dry weather, but apparently the deficiency is not very pressing as no complaints have been received for some time past.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 8 slaughter-houses (an increase of 1), 59 dairies, &c. (a decrease of 11), 19 bakehouses and 70 workshops (a decrease of 9). The dairies, &c., are for the most part owned by large landowners and are fairly good of their class;

the cowsheds are being gradually brought up to a better standard. Most of the milk is sent out of the district.

INFECTIOUS DISEASES.

Scarlet fever was again prevalent in North Cerney, 14 cases occurring: the probable reason for the continuity of infection was the unrecognised occurrence of scarlet fever in a mild form, but though the school was repeatedly visited and the children examined no definite case was found. There was one "return" case in Down Ampney. The number of cases of diphtheria (14) was unusually large, apparently due to infection from the Urban District: three deaths occurred making an exceptionally high fatality rate of 21.4%.

ISOLATION HOSPITAL.

Eight of the 14 cases of diphtheria and 20 of the 29 cases of scarlet fever were removed. A tent was in use during a great part of the year for scarlet fever: the provision of better isolation accommodation is under consideration.

Area 26,876 Acres. Assessable Value: £57,212. 1d. Rate: £238.

Population 1901	...	11,636
1911	...	12,233
Increase 1901-11	...	597 (5.1%)
Estimated Population 1913	...	12,377

Medical Officer of Health ... R. A. Brewis, M.D.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias Clay to Greater Oolite.

CHIEF INDUSTRIES: Largely agricultural; iron works and saw mills, (Slimbridge), edged tool works (Coaley), cloth, leather-board and flour mills (Cam), agricultural implement, petrol engine, electric motor and bicycle works, and rope and carpet factories (Dursley), silk and elastic factory (Kingswood) and printing works (Wotton-under-Edge).

HOUSING.

One hundred and thirty-five houses were inspected and 48 found to have defects, all of which were remedied; 1 closing order was made. The chief defects were lack of light and ventilation, unsatisfactory larders and deficient rain spouting.

Thirty-four new houses were built during 1913. A scheme for building 38 houses in Dursley at a cost of £8,300 has been approved by the Local Government Board and a scheme for 8 houses at Wotton-under-Edge has been adopted but has not yet been sanctioned by the Board. There is still a demand for houses for the working-classes in every parish in the district with the exception of Owlpen, the demand being especially urgent in Dursley, Cam, Coaley and Uley. In Cam 20 houses will probably be built by private enterprise during 1914.

SEWERAGE AND SEWAGE DISPOSAL.

DURSLEY AND CAM JOINT SCHEME.—In Dursley 499 houses have been connected and there are 87 houses connected with an old sewer discharging into the Cam Brook. In Cam only 44 (including 7 new houses during 1913) of the total 437 houses have been connected.

WOTTON-UNDER-EDGE.—A scheme estimated to cost £10,500 has been sanctioned by the Local Government Board but the work has not yet been started.

KINGSWOOD.—House drains have been connected with an old stormwater drain which discharges into the brook; the closets of three large mills also discharge directly into the stream. A scheme of sewerage is desirable, but whether it should embrace the whole village or only parts will receive the attention of Dr. Brewis during 1914.

NYMPFIELD.—Twenty-four houses have been connected with a surface water drain discharging in the fields leading to Newmarket, Nailsworth, but no complaints have been received as regards the outfall. Several complaints of offensive smells from the road grating have been received, and pollution of a well and flooding of a cellar have been caused by a stoppage of the drain. Re-construction of the drain is under consideration.

In the remaining 6 parishes there are no sewers and the privy vault is the common form of closet.

RIVERS POLLUTION.

The Cam is polluted by the old sewer at Dursley, the pollution diminishing as the drains are connected with the new sewer, and at Lower Cam where drains and closets empty into it; no action was taken during 1913 to prevent this pollution at Cam. The Dyer's Brook is polluted by Wotton-under-Edge, for which a drainage scheme has been prepared, and by Kingswood, for which a scheme is desirable.

REFUSE DISPOSAL.

There is weekly collection of refuse at Dursley, Wotton-under-Edge (including pail closets) and Cam. The refuse tip for Dursley at Whiteway has been used too long, but it is expected that a disused gravel pit at Woodmancote, in every way suitable, will soon be acquired.

WATER SUPPLY.

COALEY, DURSLEY, KINGSWOOD AND WOTTON-UNDER-EDGE.—The public supplies are constant and good but the waters are hard.

CAM.—There are small supplies at Upper and Lower Cam but the chief sources are shallow wells, many of which are open to pollution. There is a great need for a public water supply, but no improvements were effected during 1913.

In other parishes the chief source of supply is derived from shallow wells.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 2 common lodging-houses, 20 slaughter-houses (an increase of 1), 190 dairies, &c. (an increase of 9), 25 bakehouses (an increase of 1), 28 workshops and 3 out-workers' premises (an increase of 1). The condition of these places is regarded as generally satisfactory.

INFECTIOUS DISEASES.

The prevalence of both scarlet fever and diphtheria was considerably less than in the previous year. Twelve cases of pulmonary tuberculosis were notified, 2 being admitted to the Sanatorium.

ISOLATION HOSPITAL.

The accommodation at The Moors, Coaley, has been usually sufficient. It is not regarded as suitable for the treatment of

two diseases concurrently, though in emergencies this is done—during 1913 on two occasions; on neither occasion did any cross-infection result.

BURIAL GROUND.

WOTTON-UNDER-EDGE.—A Local Government Board Inquiry was held and it was expected that a closure order would be received shortly. Steps are being taken to procure a new Burial Ground.

EAST DEAN & UNITED PARISHES RURAL DISTRICT 133

Area 28,626 Acres. Assessable Value: £65,180. 1d. Rate: £272.

Population 1901	...	20,011
1911	...	19,952
Decrease 1901-11	...	59 (.3%)
Estimated Population 1913	...	19,934

Medical Officer of Health:

O. W. Andrews, M.B., D.P.H., Deputy Surgeon-General R.N.

CHIEF GEOLOGICAL SUBSTRUCTURES: Coal Measures; New and Old Red Sandstone.

CHIEF INDUSTRIES: Coal mining, stone quarrying and agriculture.

This District was included in the West Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Andrews, the first officer, took over the duties at the end of July, 1913.

HOUSING.

One hundred and nine houses owned by the Crown in Ruardean Woodside and Minsterworth were inspected and 87 found to have defects: 40 were remedied. Ten houses were unfit for human habitation and 6 were closed. There is deficiency of houses for the working-classes in East Dean, Littledean, Mitcheldean, Longhope and Minsterworth; better housing is one of the chief sanitary requirements of the district.

SEWERAGE AND SEWAGE DISPOSAL.

CINDERFORD AND RUSPIDGE.—The outfall works, on the whole, have been working satisfactorily.

DRYBROOK.—During the year strong complaints have been received. The nuisance arises from the discharge of sewage from houses, unknown to the Council, into the brook. When the brook becomes dry serious offence is caused. On the stoppage of pumping at the Wigpool Works, a dam was constructed to flush the stream bed, but water percolated to the adjoining fields and the use of the dam was discontinued. Dr. Andrews made a special report which is still under consideration.

Drainage is also needed at Steam Mills and Littledean.

REFUSE DISPOSAL.

Refuse is collected at Cinderford and is used for filling up dangerous and offensive ditches; unsightly and insanitary receptacles are used by many householders. In Mitcheldean there is no scavenging system and therefore the yards are often in a bad condition.

WATER SUPPLY.

CINDERFORD.—Nineteen houses were newly supplied and the total number now connected with the mains is 2,021.

RUARDEAN HILL.—A contract for the necessary pumping machinery has been accepted from Hathorn, Davey & Co., of Leeds, and the preparation of that part of the scheme relating to the service reservoir and mains will be taken in hand during 1914.

BLAKENEY HILL.—The mains have been extended from Old Furnace Bottom to Pitching Green, and 2 standpipes erected.

MITCHELDEAN.—The mains of the Company which were in an unsatisfactory and leaky condition have been repaired and improvements have been effected.

RUARDEAN.—The Parish Council have promised to make a report on the supply of several houses at Lower Lydbrook, but have not yet done so.

VINEY HILL.—Some houses are dependent on rain-water storage, and last summer the occupiers had to fetch their water from comparatively long distances. There has been a conference between the East and West Dean Rural District Councils, and it is hoped that a scheme proposed by the former will be accepted by the latter.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house, 23 slaughter-houses (an increase of 1), 77 dairies, &c. (a decrease of 1), 41 bake-houses (an increase of 2) and 72 workshops (a decrease of 4). Four carcasses and a kit of fish were destroyed, one carcass of a cow after veterinary inspection.

INFECTIOUS DISEASES.

There was an unusually large number (156) of cases of scarlet fever, about half in Cinderford and Lydbrook. It is quite clear that it was owing to there being so many mild cases, which acted as carriers, that the epidemic was so extensive as it was.

BYE-LAWS.

Two years ago there was some discussion as to the advisability of revising the bye-laws, but so far nothing has been done.

FARINGDON RURAL DISTRICT
(GLOUCESTERSHIRE PARISH OF LECHLADE.)

Area 3,870 Acres. Assessable Value : £5,324. 1d. Rate : £22.

Population 1901	...	1,179
1911	...	1,167

Decrease 1901-11	...	12 (1%)
------------------	-----	---------

Estimated Population 1913	...	1,163
---------------------------	-----	-------

Medical Officer of Health ... W. Sisam, M.D., B.Sc., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURE: Oxford Clay.

CHIEF INDUSTRY: Agriculture, especially production of milk.

HOUSING.

The inspection of this parish is not yet completed and it cannot be stated definitely whether deficiency exists; a large proportion of working-class dwellings are very old and insanitary, and improvement is needed. There are no building bye-laws and no systematic supervision over the erection of new buildings is exercised.

SEWERAGE AND SEWAGE DISPOSAL.

With the exception of outlying portions the whole town is sewered, and the majority of the houses are provided with water closets connected with the sewers. Sewage is treated by settling tanks and filters.

REFUSE DISPOSAL.

There is no public scavenging.

WATER SUPPLY.

Water is pumped from wells in the gravel to water towers for the supply of the town and is distributed by standpipes.

and house connections. Private wells supply the remainder of the parish.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house, 2 slaughter-houses, 6 dairies, &c. (an increase of 1), 5 bakehouses and 6 workshops (an increase of 2). These were all inspected; efforts are made to keep the cowsheds and dairies up to as high a standard of sanitation as can be reasonably enforced under existing regulations.

INFECTIOUS DISEASES.

The only case notified was one of pulmonary tuberculosis. Dr. Sisam refers to the mutual arrangements made in both the Berkshire and Gloucestershire parishes for the visiting of notified cases by the Tuberculosis Dispensary Officers.

ISOLATION HOSPITAL.

The Council possess 3 Berthon portable hospital tents and 3 permanent concrete sites. Though of great value for emergency purposes they are not suitable for general use and were not used during the year. Cases from other parishes were sent to the Abingdon Joint Hospital under the agreement made at the end of 1912.

DISINFECTION.

Disinfection of rooms is done with a spray and coal tar preparation; bedding, &c., is treated in the steam disinfector at the Swindon Isolation Hospital or burnt and compensation given.

Area 30,680 Acres. Assessable Value: £86,192. 1d. Rate: £359.

Population 1901	...	10,779
1911	...	12,615
Increase 1901-11	...	1,836 (17.0%)
Estimated Population 1913	...	13,047

Medical Officer of Health:

O. W. Andrews, M.B., D.P.H., Deputy Surgeon-General R.N.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias and Alluvium.

CHIEF INDUSTRIES: Agriculture.

This District was included in the West Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Andrews, the first officer, took over the duties at the end of July, 1913.

HOUSING.

One hundred and sixty-six houses in 7 parishes were inspected and 66 found to have defects of which 65 were remedied.

SEWERAGE AND SEWAGE DISPOSAL.

CHURCHDOWN.—Sanction was obtained to a loan of £11,565 for the sewerage and sewage disposal works. The scheme, though not fully comprehensive, meets all urgent requirements and it was expected to be in working order in April, 1914. The sewers are designed for an ultimate population of 10,000: the disposal works include settling tanks and filters with revolving sprinklers.

LONGLEVENS (Wotton St. Mary Without).—The drainage question is still one of the pressing needs of the district.

TUFFLEY.—Both Lower and Upper Tuffley require a proper drainage system: one portion could be drained to the City sewers; for the remainder, where the cost of a sewerage scheme would be prohibitive, Dr. Andrews suggests a system known as the “Fosse Permanente,” *i.e.*, water-tight cess-pools which are emptied by suction into air-tight carts.

Alterations in the drainage of the second Asylum are proposed whereby a portion will be connected with the North End Drainage System, instead of being disposed of by broad irrigation.

WATER SUPPLY.

CHURCHDOWN.—An agreement has been made with the Gloucester Corporation to lay the mains and the District Council has guaranteed a minimum rental for water. It was anticipated the supply would be available in April, 1914.

TUFFLEY.—A proper water supply is required.

HEMPSTEAD.—Several houses at the Rea are dependent on water from the Severn, and cases of enteric fever resulted during 1913. During the very dry weather the inhabitants of Lower Rea were, at Dr. Andrews' suggestion, supplied by means of a water cart.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 4 slaughter-houses, 90 dairies, &c. (a decrease of 2), 13 bakehouses, 30 workshops (an increase of 1) and 4 premises of outworkers, all of which were inspected.

INFECTIOUS DISEASES.

There was a considerable rise in the numbers of cases of scarlet fever and diphtheria but it was considered that, in view of the prevalence of scarlet fever in the West of England, the district may be congratulated on escaping with 46 cases. Half of the 42 cases of diphtheria occurred in Churchdown:

Dr. Andrews regards this prevalence as associated with bad sanitation, and hopes that when the new sewerage and water supply come into use there will be a marked diminution.

Of the 12 cases of enteric fever 8 occurred in the Barnwood Asylum: on investigation the conditions were found satisfactory in all respects except that the only ventilation for the sewerage system was on the ground level near where several of the affected persons were working, and other means of ventilation were recommended. The remaining four cases were attributed to the drinking of Severn water at Hempstead and Sandhurst.

ISOLATION HOSPITAL.

The arrangement for the reception of patients into the City Hospital at a cost of £2 2s. 0d. weekly per patient worked satisfactorily, and 8 of the 42 cases of diphtheria and 1 of the 46 cases of scarlet fever were sent to the hospital.

LYDNEY RURAL DISTRICT

141

Area 24,554 Acres. Assessable Value: £52,476. 1d. Rate: £219.

Population 1901	...	8,649
1911	...	9,005
Increase 1901-11	...	356 (4.1%)
Estimated Population 1913	...	9,086

Medical Officer of Health:

O. W. Andrews, M.B., D.P.H., Deputy Surgeon-General R.N.

CHIEF GEOLOGICAL SUBSTRUCTURES: Old Red Sandstone, Carboniferous Limestone, Keuper Marl and Alluvium.

CHIEF INDUSTRIES: Agriculture, with large tinplate works at Lydney and stone quarries at Tidenham.

This District was included in the West Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Andrews, the first officer, took over the duties at the end of July, 1913.

HOUSING.

Two hundred and three houses at Primrose Hill and Allaston Mesne, Lydney, were inspected, and it is hoped that during 1914 the inspection of the town of Lydney will be completed. Seventeen of the 203 houses were found to have defects. A report by the Sanitary Inspector on the Housing Conference at Bath is given.

SEWERAGE AND SEWAGE DISPOSAL.

No new sewers were provided but 39 new drains were made and 4 houses were newly connected with the sewers.

REFUSE DISPOSAL.

The house refuse from Lydney is carted to the Dingle.

WATER SUPPLY.

LYDNEY.—Twenty-three houses were connected; 1 well in Queen Street was closed.

WOOLASTON.—No house connections have yet been made.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 6 slaughter-houses, 29 dairies, &c. (an increase of 1), 17 bakehouses (a decrease of 1) and 40 workshops. These places are frequently inspected: special mention is made of the excellent improvements in the bakehouse of the Lydney Co-operative Society. The district suffers from the milk produced being sent away to distant towns.

INFECTIOUS DISEASES.

Scarlet fever was again prevalent, 60 cases being notified, most of them of a mild type. Thirty-one of the total number occurred at St. Briavels and Tidenham, the original case not being discovered until the child was found to be peeling in St. Briavels School. Forty-seven cases, over 78% of the total, were treated in Hospital.

ISOLATION HOSPITAL.

The Hospital at Alvington is well managed and every case treated there made a good recovery. For 6 weeks during the epidemic an extra nurse was engaged. A new ambulance was purchased in August for £75 and is a great boon: the road in front of the hospital was much improved at a cost of £12.

QUARANTINE OF VESSELS.

A mooring station has recently been allotted. The Sanitary Inspector inspects every vessel on arrival in the Lydney

Dock so far as practicable and will inform the Medical Officer of Health of any suspicious illness. Any case of infection will be conveyed to the Alvington Hospital and the ship placed in quarantine in the Kingroad, off Portishead. Arrangements have also been made for the hire of a steam launch, if necessary, to convey the Medical Officer of Health to a suspected ship.

Area 8,823 Acres. Assessable Value : £7,832. 1d. Rate : £33.

Population 1901 ... 1,485

1911 ... 1,609

Increase 1901-11 ... 124 (8.4%)

Estimated Population 1913 ... 1,637

Medical Officer of Health ... A. Thomson, M.B., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias, Keuper Marl and Alluvium.

CHIEF INDUSTRY: Agriculture.

HOUSING.

During the year house inspection has been adequately carried out. Fifty houses were inspected and 18 were found to have defects, 12 of which were remedied. A scarcity of houses for the working-classes exists in Welford.

SEWERAGE AND SEWAGE DISPOSAL.

Two houses were newly connected with sewers, and 4 improved privies constructed.

REFUSE DISPOSAL.

There is no public system of scavenging. In another report Dr. Thomson says, "greater provision of covered receptacles for household refuse would assist in preventing the spread of disease by means of flies: these filth bearers exist in exact ratio as food supply and breeding grounds for them exist."

WATER SUPPLY.

The main for the water supply of Pebworth has been extended to Long Marston; this has for many years been urgently needed.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 4 dairies, &c., and 1 residence of an out-worker, all 5 of which were inspected during the year.

INFECTIOUS DISEASES.

Thirteen cases were notified including 10 of scarlet fever, 2 of diphtheria (1 fatal) and 1 of pulmonary tuberculosis. The cases of scarlet fever occurred in Long Marston and Clifford Chambers

Speaking of tuberculosis in his report on another district Dr. Thomson observes, "there is no question that the crusade against tuberculosis is going to effect a diminution in the number of cases, and as time goes on the way will be seen clearer to have continuous efficient care of sufferers from the disease. By 'continuous' I refer to efficient housing and feeding of invalids treated at their homes."

ISOLATION HOSPITAL.

All the cases of scarlet fever and diphtheria were removed to the Joint Isolation Hospital at Stratford-on-Avon.

NEWENT RURAL DISTRICT
(GLOUCESTERSHIRE PART).

Area 35,540 Acres. Assessable Value: £39,780. 1d. Rate: £166.

Population 1901	...	7,067
1911	...	6,964

Decrease 1901-11	...	103 (1.5%)
------------------	-----	------------

Estimated Population 1913	...	6,964
---------------------------	-----	-------

Medical Officer of Health ... A. G. Higgins, M.R.C.S.

CHIEF GEOLOGICAL SUBSTRUCTURES: New and Old Red Sandstone.

CHIEF INDUSTRIES: Agriculture, a tannery and one or two small saw mills.

HOUSING.

Systematic house-to-house inspection has been commenced but the complete record will take a long time. The chief difficulty met with is getting the recommendations carried out as the necessary money for repairs is not forthcoming. There is a great need for better accommodation for the working-classes.

SEWERAGE AND SEWAGE DISPOSAL.

The sewerage system in Newent is ancient, but the drainage gives little trouble owing to the sandy subsoil; there is still a good number of old-fashioned earth closets. The town sewage tanks are in bad need of new and enlarged filter beds; the effluent is discharged into a small stream.

REFUSE DISPOSAL.

Refuse is collected twice weekly in Newent and is conveyed to a tip about a quarter of a mile from the town.

WATER SUPPLY.

Newent is supplied from the Corporation Water Works; the water is extremely hard and causes much trouble to householders, but the supply is excellent and abundant.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house, 3 slaughter-houses (a decrease of 1), 16 dairies, &c. (an increase of 12), 5 bake-houses (a decrease of 1) and 13 workshops (a decrease of 1). All these places were inspected once during the year.

INFECTIOUS DISEASES.

The notifications included 18 cases of scarlet fever, 1 of diphtheria and 4 of erysipelas. As regards scarlet fever it is observed that a number of sporadic cases occurred, but by timely isolation it was possible to prevent anything like an epidemic.

ISOLATION HOSPITAL.

The temporary building at Oxenhall is quite unsuitable, but a small Committee visited it and recommended one or two minor improvements which do not bring it any nearer the ideal than it was before. There is an arrangement for the removal of cases to the City Hospital at Over, but no cases were removed during 1913.

Area 70,018 Acres. Assessable Value : £34,612. 1d. Rate : £144.

Population 1901 ... 8,100

1911 ... 8,056

Decrease 1901-11 ... 44 (.5%)

Estimated Population 1913 ... 8,056

Medical Officer of Health ... E. J. R. MacMahon, L.R.C.P.,I.

CHIEF GEOLOGICAL SUBSTRUCTURES: Inferior to Greater Oolite.

CHIEF INDUSTRY: Essentially an agricultural district.

HOUSING.

Three hundred and eleven houses in Northleach, Eastleach and Bibury were inspected and 92 found to have defects of which 37 were remedied. The chief defects were dilapidated roofs and floors, decayed roof timbers, dirty walls and ceilings, insanitary closet accommodation and defective drainage. In very many instances the windows do not open, and in most there is no through draught; for the latter considerable structural alterations might be necessary, but windows can easily be made to open and this should be insisted on.

Bye-laws with respect to New Buildings, &c., should be adopted.

SEWERAGE AND SEWAGE DISPOSAL.

Three improved privies were constructed and 5 privy vaults abolished. Fifteen notices to empty privy vaults were served.

REFUSE DISPOSAL.

A system of scavenging is desirable for Northleach.

WATER SUPPLY.

The district generally is supplied with an abundant and satisfactory supply. Several samples were examined.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 3 slaughter-houses, 20 dairies, &c. (an increase of 8), 15 bakehouses (an increase of 6), 13 workshops (an increase of 4) and 1 outworker's premises. These were all inspected and found satisfactory. Tuberculin test of cattle is advised.

INFECTIOUS DISEASES.

Sixteen cases were notified including 3 of scarlet fever and 7 of pulmonary tuberculosis.

ISOLATION HOSPITAL.

The hospital is near Northleach.

Area 17,326 Acres. Assessable Value : £17,508. 1d. Rate : £73.

Population 1901 ... 2,944

1911 ... 3,239

Increase 1901-11 ... 295 (10%)

Estimated Population 1913 ... 3,297

Medical Officer of Health ... D. Gordon-Evans, M.D., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURE: Lower Lias Clay.

CHIEF INDUSTRIES: Market gardening and farming; also homework in glove making.

HOUSING.

Eighty houses in Cow Honeybourne were inspected and 42 found to have defects of which 11 were remedied. Seven houses were unfit for human habitation and 4 closing orders were made; the orders, however, were not enforced owing to the dearth of houses. The Council are erecting 10 houses (of which the Sanitary Inspector gives some details) in Pebworth, the cost of building being £1,480, and are proposing to build a similar number at Honeybourne.

SEWERAGE AND SEWAGE DISPOSAL.

ASHTON-UNDER-HILL.—The open road drains have been replaced by twelve-inch pipes, effecting a vast improvement in the appearance of the village.

The Council are strongly recommended to adopt a similar course in other villages where the obsolete plan of draining the surface water by means of open ditches obtains.

RIVERS POLLUTION.

There are no rivers or streams of any consequence to be polluted.

WATER SUPPLY.

ASTON SOMERVILLE, COW HONEYBOURNE, HINTON-ON-THE-GREEN and PEBWORTH.—These villages are included in the Evesham and Pebworth Villages Water Scheme, the resources of which were increased during the year by the addition of 250,000 gallons per *diem* from 6 springs in Lidcombe Wood, Stanway, acquired on a lease of 99 years from Lord Elcho. At the same time the water pressure in the mains, of which complaints had previously been received, was materially improved.

ASHTON-UNDER-HILL.—Arrangements have been made to allow connection of houses with the mains; formerly the supply was distributed from standpipes. Shortage of water was experienced during the year and steps are being taken to augment the supply.

WESTON-SUB-EDGE.—A new spring has been added to the supply, and there is excellent pressure throughout the village.

There has been an ample supply to all the villages; periodical bacteriological and chemical analyses have been made, and all samples were found to be free from any source of contamination.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 slaughter-house, 22 dairies, &c. (a decrease of 2), 5 bakehouses, 11 workshops (a decrease of 2) and 60 outworkers. These places are periodically inspected and all necessary action taken. It is said that though the dairies and cowsheds have been kept in a cleanly state, there is room for improvement in the surroundings of the cowsheds, but that, as the present law is so unsatisfactory, no action has been taken. Dr. Gordon-Evans records finding 7 different forms of disease germs on the outside crust of a loaf purchased

from an open cart on the highway, and advocates the delivery of bread in closed paper bags.

INFECTIOUS DISEASES.

The cases notified were 2 of diphtheria, 7 of scarlet fever and 6 of pulmonary tuberculosis; 1 case of diphtheria and 2 of scarlet fever were removed to the Isolation Hospital. Dr. Gordon-Evans says, "tuberculosis is more prevalent in the district than was at first formulated," and refers to the County scheme for the treatment and prevention of the disease; each case is visited by the Medical Officer of Health, the house is inspected, contact cases are searched for, and disinfection is carried out by the Sanitary Inspector.

ISOLATION HOSPITAL.

The hospital is the Evesham and Pebworth Joint Isolation Hospital at Bengeworth, Evesham.

SCHOOLS.

Dr. Gordon-Evans says, "no active measures have yet been taken to improve the ventilation of the Elementary Schools." Willersey was closed for a fortnight in September on account of the prevalence of whooping cough.

STOW-ON-THE-WOLD RURAL DISTRICT 153

(GLOUCESTERSHIRE PART).

Area 42,203 Acres. Assessable Value : £34,772. 1d. Rate : £145.

Population 1901	...	6,473
1911	...	6,803

Increase 1901-11	...	330 (5.1%)
------------------	-----	------------

Estimated Population 1913	...	6,803
---------------------------	-----	-------

Medical Officer of Health ... R. E. B. Yelf, M.B., C.M.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias to Greater Oolite.

CHIEF INDUSTRIES: Agriculture, especially production of milk; stone slate quarrying at Eyford; also residential and fishing resorts.

HOUSING.

One hundred and eighty-nine houses were inspected and 137 found to have defects of which 104 were remedied on informal notices. There is believed to be a shortage of houses for the working-classes at Bledington, which has been brought about by the large number of railway employees who reside in this village.

SEWERAGE AND SEWAGE DISPOSAL.

BOURTON-ON-THE-WATER AND UPPER SLAUGHTER.—These are the only villages with systems of sewerage; they work satisfactorily.

BROADWELL.—The Thames Conservancy Board drew attention to pollution of the Evenlode from this village and have approved of a simple scheme—which is in hand—for the treatment of the sewage on land.

LOWER SWELL.—Owing to the action of the Thames Conservancy Board the drainage has been diverted from the Dikler and is now treated by a system of irrigation.

RIVERS POLLUTION.

Complaints as to the pollution of the Evenlode by Broadwell and the Dikler by Lower Swell have been met by the alterations mentioned above.

REFUSE DISPOSAL.

BOURTON-ON-THE-WATER.—On a complaint to the Local Government Board by some of the inhabitants, and a report by Dr. Yelf, the District Council made arrangements for the weekly collection of house refuse which has proved satisfactory to the inhabitants.

In other villages each tenant is responsible for the disposal of house refuse.

WATER SUPPLY.

BLINGTON.—The present supply is obtained from wells, many of which are subject to contamination. A Sub-Committee considered two proposals of an engineer—(1) a supply by gravitation from Oddington, and (2) sinking a deep well; the cost of each scheme was regarded as too great and neither was carried out. Dr. Yelf points out that the supply of the village continues in a very unsatisfactory condition.

NAUNTON.—A small extension was carried out.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 3 slaughter-houses, 29 dairies, &c. (an increase of 3), 14 bakehouses (a decrease of 1) and 38 workshops (a decrease of 8). The slaughter-houses were kept in a satisfactory condition, and minor defects in bakehouses and workshops were remedied.

Complaints have been made of offensive smells from the boiling of carcases at two places in the district, and restrictions will have to be considered.

INFECTIOUS DISEASES.

There was a most unusual prevalence of infectious diseases which children are so liable to contract. Twenty-eight cases of scarlet fever, 5 of diphtheria and 1 of enteric fever were notified. The chief outbreak of scarlet fever occurred in the autumn at Lower Slaughter and Lower Swell, introduced by a visitor; some attacks are so mild that medical advice is not sought and thus the disease has a chance of spreading, though scarlet fever is much easier to control than measles and whooping cough, provided the first cases are recognised and isolated. Six cases of pulmonary tuberculosis were notified; the cases are visited, flasks supplied and disinfection after deaths undertaken. A dispensary has been opened at the old fever ward in the grounds of the Moreton-in-the-Marsh Cottage Hospital.

ISOLATION HOSPITAL.

There is no Hospital accommodation for infectious diseases, and Dr. Yelf is not convinced of the necessity for one. The hospital tents are reported to be in good order and ready for immediate erection.

Area 37,223 Acres. Assessable Value: £107,956. 1d. Rate: £450.

Population 1901 ... 27,793

1911 ... 28,068

Increase 1901-11 ... 275 (1.0%)

Estimated Population 1913 ... 28,189

Medical Officer of Health ... R. Green, M.D., D.Hy.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias to Greater Oolite.

CHIEF INDUSTRIES: Cloth mills; flock mills; pin mills; carpet and stick factories; engine, paint, rubber, boat, brick, printing and piano works; quarrying; ready-made clothing; agriculture.

HOUSING.

Two hundred and forty-six houses were inspected and 55 found to have defects, all of which were remedied. It is said that at this rate the inspection will take 25 years. The chief defects are living-room windows not opening, general dilapidation and dampness; 30 living-room windows were made to open but hundreds are still to be done. The provision of dwellings for the working-classes is under consideration by the Council.

SEWERAGE AND SEWAGE DISPOSAL.

MINCHINHAMPTON.—A septic tank and filter have been put down effecting a great improvement on the old state of affairs.

No fresh districts have been sewered and no special changes have been made at any of the other sewage works. In unsewered parishes privies and slops are deposited on the gardens: it is certain that surface wells in small gardens are thus pol-

luted and are potentially dangerous: an outbreak of round worms, affecting various families using the same well, was probably due to infection in this way, and in such districts it is most necessary that a main supply of water should be provided.

RIVERS POLLUTION.

The trade processes are not conducive to clean streams. In certain places privies are placed over pure streams, a practice which cannot be too much condemned.

REFUSE DISPOSAL.

Public scavenging is carried out in 6 parishes; the deposits of refuse on many parts of Minchinhampton Common is very unsightly.

WATER SUPPLY.

Forty-two per cent. of the houses in the 13 parishes supplied by the Stroud Water Company have been connected with the mains: Bisley and Randwick have not yet been supplied. The water is softened and pumped to Minchinhampton Common. In many districts surface wells in gardens are naturally most liable to pollution from manure and from the deposit of slop waters and the contents of privies on the surface; infection with typhoid germs might easily take place and cause extensive outbreaks.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 25 slaughter-houses (a decrease of 11), 108 dairies, &c. (a decrease of 4), 39 bakehouses (an increase of 9), 77 workshops (a decrease of 13). No list of outworkers were received. Many of the slaughter-houses are old and out of date, but as a rule are kept in a cleanly state. Though pigs are specially prone to tuberculosis, and though large numbers are slaughtered in the district, apparently none of them are tuberculous. Many of the cowsheds are not at all

ideal and the methods of milk production are not according to the most modern principles. Three cows were reported as suspected of tuberculosis and were dealt with by the Veterinary Inspector of the County Council.

Gut-scraping at Cainscross is carried on in a satisfactory manner and no complaint was received.

INFECTIOUS DISEASES.

Scarlet fever was more prevalent than in any year since 1901 and in rather severe form: the hospital fatality rate was 4%, the average for the 9 years being only 1.5%. The chief causes of the spread were mild unrecognised cases and patients in the early stages. Diphtheria was rather more prevalent than in 1912; a serious epidemic at Randwick was averted by swabbing all the children and excluding the "carriers" (almost half the total of over 100) from school. The school was closed for 3 weeks and the "carriers" treated as out-patients at the Isolation Hospital.

Nearly all the notified cases of tuberculosis attended at the Dispensary, where a large number of contacts and school children were also examined and many found to have tuberculosis. Of the 82 cases of pulmonary tuberculosis 44 were sent to the Sanatorium where most of them derived great benefit. There is great need for hospital accommodation which it is hoped will be provided very shortly.

ISOLATION HOSPITAL.

During the 9 years it has been open 530 cases of scarlet fever, 391 of diphtheria and 29 of typhoid fever have been treated, the average fatality rates being 1.5, 6.6 and 13.6% respectively.

DISINFECTION.

Premises are disinfected by a spray; bedding is not now removed unless it is desired by the householder.

TETBURY RURAL DISTRICT

159

(GLOUCESTERSHIRE PART).

Area 26,300 Acres. Assessable Value : £19,700. 1d. Rate : £82.

Population 1901	...	3,800
1911	...	3,913

Increase 1901-11	...	113 (3.0 %)
------------------	-----	-------------

Estimated Population 1913	...	3,935
---------------------------	-----	-------

Medical Officer of Health: M. Ashley, M.B., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURES: Inferior to Greater Oolite.

CHIEF INDUSTRIES: Agriculture, especially milk production.

This District was included in the East Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Ashley, the first officer, took over the duties in April, 1913.

HOUSING.

Most of the unoccupied houses are unfit for occupation and many of those inhabited are also unfit, especially in the parishes of Cherington, Avening and Bagpath, the defects being—besides general dilapidations due to the great age of the houses—leaky roofs, defective paving and unsatisfactory structural conditions, whilst insufficient ventilation due to windows not being made to open is also very common. The great majority of the houses are built of stone and roofed with stone tiles. There appears to be a dearth of labour in this district for the purpose of the necessary repairs and the owners of houses have found a difficulty in getting the work done.

Sixty-six houses were inspected and 46 were found to have defects for which notices were necessary. Of 7 houses which

were unfit for human habitation, 6 were closed voluntarily and 1 as a result of a representation made to the District Council.

SEWERAGE AND SEWAGE DISPOSAL.

Most of the closets are privies but there are a few pail closets and water closets in better class houses. There is one sewer in Didmarton but no satisfactory means of sewage disposal. Steps are being taken to ensure a better method by means of a septic tank and broad irrigation.

Difficulty has for some time been experienced at Leighterton from the drainage of a farm overflowing the road and polluting a village pool. Notice was served on the owner with a view to the drainage being carried by pipes to a field for irrigation thereon.

RIVERS POLLUTION.

The Avon receives the drainage of the roads and of the cattle market in Tetbury and the effluent from the Urban Sewage Works. The stream in Avening is polluted to some extent by the drainage from certain houses which were connected with a highway drain some years ago.

WATER SUPPLY.

About half the 11 parishes are provided with a piped supply of water, the rest being supplied from springs, wells or rain water: of these Leighterton and Tetbury Upton are insufficiently supplied in dry weather, although no complaints have lately been received. The West Gloucestershire Water Company have given notice of their intention to apply for powers to sink a well at Shipton Moyne and supply the greater part of the district.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 slaughter-house, 23 dairies, &c., 3 bake-houses and 8 workshops (an increase of 1). The dairy farms

are mostly in the hands of large landowners and the chief conditions calling for improvement are due to accumulation of manure in the yards or insufficient cleanliness owing to badly-laid or badly-drained surfaces; 11 tubercular cattle were dealt with by the police. The slaughter-house and bakehouses, on the whole, are satisfactorily conducted.

INFECTIOUS DISEASES.

All the 7 cases of scarlet fever were centred on Avening. One child was found to have been attending the school in an infectious condition and enquiries elicited that another family had also been infected without the nature of the disease having been discovered. On isolating these cases at home the epidemic quickly subsided. A single case of diphtheria was undoubtedly connected with infection in the town of Cirencester.

ISOLATION HOSPITAL.

No hospital is available for infectious diseases and no provision has been made for small-pox. Some advantage might be gained if the Tetbury Districts combined with the Cirencester Districts.

(GLOUCESTERSHIRE PART).

Area 28,366 Acres. Assessable Value : £38,008. 1d. Rate : £158.

Population 1901 ... 4,986

1911 ... 5,074

 Increase 1901-11 ... 88 (1.8%)

 Estimated Population 1913 ... 5,074

Medical Officer of Health: A. Fowell-Turner, L.R.C.P. Ed.

CHIEF GEOLOGICAL SUBSTRUCTURES: Keuper Marl, Lower Lias and Alluvium.

CHIEF INDUSTRIES: Entirely agricultural—pasture, corn and market gardening.

HOUSING.

On the instructions of the District Council the villages are being inspected in alphabetical order, so that this year only 15 houses in this part of the district, in Ashchurch, were inspected. Ten houses were closed and 2 demolished. A local inquiry was held in Ashchurch as to the need of more houses and several applications were received; it was decided to build 10 houses but a site had not been found.

SEWERAGE AND SEWAGE DISPOSAL.

The drainage systems at Ashchurch and Kemerton are in a satisfactory condition. Nine houses were connected.

WATER SUPPLY.

Kemerton, Oxenton and Woolstone, and parts of Boddington and Ashchurch have public supplies. There is a great want of water in the hamlets of Pamington, Aston Cross, Fiddington and Aston-on-Carrant, in Ashchurch parish, which, for the third year, were supplied with water carted from Ashchurch

School. A loan of £2,300 has been sanctioned for the extension of the mains of the Cheltenham supply to these hamlets, and it is expected that the scheme will be carried through before the end of the year.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 52 dairies, &c. (an increase of 1), 8 bake-houses and 19 workshops. The condition of the cowsheds and dairies is now much more satisfactory than in former years.

INFECTIOUS DISEASES.

Nine cases of scarlet fever (of which 8 were removed to hospital), 1 case of erysipelas and 7 of tuberculosis were notified. All houses where cases of pulmonary tuberculosis occurred were disinfected.

ISOLATION HOSPITAL.

The new scarlet fever block, observation wards and discharging ward have been opened. A steam disinfecter has been erected, and a new laundry and extension to the administrative block have been built.

SCHOOLS.

The schools are all in a good sanitary condition. Five were closed for varying periods on account of the prevalence of measles and one on account of whooping cough.

Area 64,241 Acres. Assessable Value: £135,328. 1d. Rate: £564.

Population 1901	...	18,487
1911	...	19,079
Increase 1901-11	...	592 (3.2%)
Estimated Population 1913	...	19,223

Medical Officer of Health: T. Rhind, M.R.C.S., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURES: Alluvium, New and Old Red Sandstone, Carboniferous Limestone and varied Volcanic Rocks.

CHIEF INDUSTRIES: Mainly agricultural, especially milk production: also docks at Sharpness and stone quarrying at Tytherington.

This District was included in the South Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Rhind, the first officer, took over the duties on the 1st February, 1913.

HOUSING.

Owing to the appointment of the Sanitary Inspector as Inspector under the Housing (Inspection of District) Regulations, 1910, being made somewhat late in the year, he has not been able to inspect as many houses as he otherwise would have done. That there is need for activity in this direction is plainly evident in the results so far achieved: of 62 houses inspected in Thornbury, 50 were found to have defects for which notices were necessary. Building schemes are more or less in preparation for Sharpness and Charfield; in the last-named place the tenants are able and willing to pay a higher rent than the agricultural labourer and so a better type of cottage could be provided for them.

SEWERAGE AND SEWAGE DISPOSAL.

The general type of closet is the privy vault; every effort is being made to replace these by dry earth pail closets.

RIVERS POLLUTION.

No matters have arisen.

REFUSE DISPOSAL.

The removal of house refuse only takes place in the towns of Thornbury and Berkeley. Dr. Rhind would like to see this important sanitary necessity carried out in all parts of the district; and refers particularly to the many infantile ailments and deaths attributable to food contamination by the house-fly breeding in heaps of household refuse.

WATER SUPPLY.

The West Gloucestershire Water Company supply a large part of the district with a constant service, and every opportunity is taken to get this supply laid on to houses whenever doubt arises as to the wholesomeness of their present supply: 26 houses were so connected during 1913. Other houses are dependent on wells.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 1 common lodging-house (a decrease of 1), 12 slaughter-houses (an increase of 2), 277 dairies, &c. (an increase of 11), 31 bakehouses (a decrease of 2), 136 workshops (an increase of 1) and 4 outworkers' premises (a decrease of 1). The slaughter-houses are kept in a clean and satisfactory condition: one new house was erected. The dairies are as a rule well kept but the cowsheds show a large margin for improvement. Two tuberculous pigs and one tuberculous bullock were discovered and destroyed.

INFECTIOUS DISEASES.

The 19 cases of scarlet fever were of a mild type. Nineteen of the 26 cases of diphtheria occurred in connection with the

infant school at Olveston; 14 of them showed bacteriological infection only, without any signs of illness. The school was closed for one week during which the District Nurse sprayed the noses and throats of the cases daily and all the children on the re-opening of the school: probably this treatment prevented other cases occurring. The infection in the one case of enteric fever was undoubtedly contracted outside the district.

ISOLATION HOSPITAL.

The old farmhouse which was intended to isolate cases of small-pox has been given up, and the buildings at Milbury Heath put into good order; a drainage system has been constructed and various internal improvements have been made. Unfortunately the water supply is very precarious.

There is no hospital for cases of infectious disease other than small-pox. Speaking of an outbreak of diphtheria Dr. Rhind says, "others in the house became infected in the new year, as was to be expected, efficient isolation not being available."

Area 10,089 Acres. Assessable Value : £53,096. 1d. Rate: £221.

Population 1901	...	15,945
1911	...	17,188

Increase 1901-11	...	1,243 (7.8%)
------------------	-----	--------------

Estimated Population 1913	...	17,487
---------------------------	-----	--------

Medical Officer of Health ... T. Aubrey, M.B.

CHIEF GEOLOGICAL SUBSTRUCTURE: Upper Coal Measures.

CHIEF INDUSTRIES: Shoemaking (chiefly home work), coal mining, chocolate factory, tailoring, corset factory, brick and tile works, paper mills, iron foundry, market gardens and dairy farms.

HOUSING.

Three hundred and twenty houses were inspected and 133 notices served for defects which were of such a nature that it was practically impossible to classify them. It is said that the Act is doing good indirectly as well as directly, as defects are remedied before inspection is made.

There is a shortage in the Hamlet of Bitton though there are houses to let in other hamlets in the parish. At a meeting of ratepayers there was a large majority in favour of the erection of new houses in Bitton Hamlet; but it is thought by Dr. Aubrey, who intends to make a full report on the latter hamlet, that an increase in the void houses at Oldland Common might result.

SEWERAGE AND SEWAGE DISPOSAL.

MANGOTSFIELD.—The sewage is treated in septic tanks and coke filters with revolving sprinklers and finally purified on the land.

SISTON.—The scheme has been completed and houses are now being connected.

OTHER PARISHES.—There are no sewers and the closets are privies or water closets discharging to cesspits and septic tanks.

REFUSE DISPOSAL.

Mangotsfield only is systematically scavenged. In other parishes the population is too scattered for regular collection of household refuse.

RIVERS POLLUTION.

As the Bath Sewage Disposal Works were still in course of construction no further samples from the river Avon were examined; it is anticipated that the works will be opened in the early months of 1914, and then it is feared there will be some complaints from the neighbouring portions of the district.

WATER SUPPLY.

The Company supplying the district have three sources—

1. Old iron mine at Frampton Cotterell.
2. New well on Oldland Common.
3. Old Californian colliery.

The last was used for a short time during the drought of 1911 and was then abandoned. It is now to be a permanent source. During the latter months of 1913 many and bitter complaints of hardness and colour were received. The hardness was found to be 32°; under their Act the Company are required to soften the water to 18°, and their defence was that owing to the shortage of water they could not guarantee a continuous supply if the softening apparatus was kept at work. The extreme hardness of the water is a serious matter, and the Council will oppose their Bill for extended powers in 1914 unless the Company are more reasonable.

As far as gross pollution goes the Company's water is above suspicion.

The policy of closing shallow wells is maintained, but the work is hampered by the great expense of laying water mains in the more sparsely populated districts.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 13 slaughter-houses (a decrease of 3), 71 dairies, &c. (an increase of 8), 20 bakehouses (a decrease of 2), 30 workshops (a decrease of 10) and a large number of outworkers' premises. The number of inspections is not given.

INFECTIOUS DISEASES.

There was an appreciable diminution in the number recorded in 1912. The type of scarlet fever was mild and the cases were scattered all over the district. Of the 22 cases of diphtheria, 14 occurred in the neighbourhood of Hanham and were an aftermath of the outbreak there at the end of 1912. Measles was prevalent in the early part of the year. Forty-three cases of pulmonary tuberculosis were notified and an interesting account is given of 5 family groups. Houses are visited, flasks are supplied and houses are disinfected after removals and deaths. A dispensary has been opened at the Council offices.

ISOLATION HOSPITAL.

The Hospital was open the whole year except from 28th April to 15th June; 46 cases were admitted, including 13 from Kingswood and 2 from Keynsham. A definite agreement with Kingswood Urban District Council has not yet been completed.

No case of diphtheria is discharged until two consecutive negative cultures from the throat have been obtained.

It is probable that beds will be provided for cases of pulmonary tuberculosis.

Area 21,469 Acres. Assessable Value : £33,352. 1d. Rate: £139.

Population 1901 ... 12,624

1911 ... 13,454

Increase 1901-11 ... 830 (6.6%)

Estimated Population 1913 ... 13,700

Medical Officer of Health ... P. Buchanan, M.B.

CHIEF GEOLOGICAL SUBSTRUCTURE: Coal Measures.

CHIEF INDUSTRIES: Coal mining (West Dean); agriculture (English Bicknor, Newland and Staunton).

HOUSING.

Progress in the housing inspection has necessarily been slow, as other and more urgent duties have too frequently claimed first attention. One hundred and six houses at Bream, Clearwell Meend, Milkwall, Symonds Yat and Hillersland were inspected and 32 found to have defects, 25 of which were remedied. Reference is made to the special circumstances of this district as there are more freeholders than in any other constituency in the kingdom. In former times the miners were more or less squatters and built their own houses, which are generally detached and each in its own garden. Often young men will secure a plot of land and gradually collect the materials for building and dig out the foundations in their spare time. Additional housing accommodation is required, especially at Yorkley and Bream in West Dean and Redbrook in Newland; in its provision Dr. Buchanan urges that it should be by assisting, and facilitating and encouraging every man to build his own house.

The model village at Cannop seems to be in a fair way to realization, but the site is in a valley, where dense fogs are prevalent, on account of proximity to the colliery and of

convenience of water supply. Sixteen houses have been built by private owners and 6 by the Crown.

SEWERAGE AND SEWAGE DISPOSAL.

The extent and conformation of the district and the absence of an efficient water supply are said to render any general system of sewerage impracticable. Showing that times are changing 15 of the larger houses have been furnished with water closets, draining to septic tanks, in place of the usual privy.

REFUSE DISPOSAL.

House refuse is deposited in ashpits, cleansed periodically by the occupier.

WATER SUPPLY.

The district is dependent on springs, shallow surface wells, deeper draw wells and small rain-water tanks in the basement of houses. Owing to the mining operations the wells soon fail in dry weather and inadequacy is felt more or less acutely over the whole district, and especially at Yorkley, Pillowell, Bream, Marsh Lane, Ellwood, Lane Ends, Five Acres, Berry Hill and along Hillersland to Symonds Yat Rock. Water has then to be carried long distances and contamination is a great risk. The matter has been under serious consideration; a deputation to the Commissioner of Woods and Forests asked for financial assistance from the Crown, which was refused, but it is hoped the County Council will be successful in obtaining it.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 11 slaughter-houses, 29 dairies, &c., 23 bake-houses and 41 workshops (an increase of 4). All with the exception of 1 slaughter-house and 7 workshops were inspected during the year and appear to have been found fairly satisfactory.

INFECTIOUS DISEASES.

Diphtheria was much less prevalent, but there was a great increase in the number of cases of scarlet fever from 14 and 48 in 1911 and 1912 to 92. Dr. Buchanan attributes this increase partly to the mildness of the cases, making diagnosis difficult, and to the disturbance of the arrangement for medical attendance on families by the National Insurance Act, so that many cases escaped detection until they had reached the peeling stage. The outbreak at Lydbrook in the autumn was of a more severe type. Cases of tuberculosis are visited, printed instructions are given, disinfection is carried out and in some cases the whole house was re-modelled.

ISOLATION HOSPITAL.

There is no Isolation Hospital and Dr. Buchanan does not advocate one. He thinks that as housing conditions improve and as people come to understand infection better, it becomes easier to isolate cases at home. An outbreak of small-pox would be dealt with by isolating the first case and vaccinating and re-vaccinating all contacts.

Area 24,462 Acres. Assessable Value: £43,260. 1d. Rate: £180.

Population 1901	...	6,105
1911	...	6,093

Decrease 1901-11	...	12 (.2%)
------------------	-----	----------

Estimated Population 1913	...	6,091
---------------------------	-----	-------

Medical Officer of Health: M. Ashley, M.B., D.P.H.

CHIEF GEOLOGICAL SUBSTRUCTURE: Lower Lias rising on hills to Inferior Oolite.

CHIEF INDUSTRIES: Chiefly agriculture; also boat building and river work, near Severn, leather board factory at Eastington and a malt factory.

This District was included in the East Gloucestershire United District for the appointment of a Medical Officer of Health under an Order of the Local Government Board, dated 11th October, 1912, and Dr. Ashley, the first officer, took over the duties in April, 1913.

HOUSING.

Very few records of houses inspected had been made and, as the health of the Sanitary Inspector began to fail, defects have not been completely dealt with.

Working-class houses are brick or stone built structures, roofed with slates or tiles: some also are thatched and many are very old. Many houses have fair sized gardens and building areas are not usually overcrowded. Sanitary arrangements are often defective: as to other defects which are found, rooms may be unceiled or windows not made to open, walls may be damp from defective spouting or inefficient pointing, paving of floors and yards may be insufficient and defective,

whilst structural inconveniences, which are incidental to old houses, are common, such as badly lighted or insufficient scullery or food store accommodation and insufficient through ventilation. Probably some of the worst are in the neighbourhood of Eastington and Frampton, although these have been improved lately.

There are no building bye-laws; although there is little building it would seem an advantage to have supervision over those houses that are built.

SEWERAGE AND SEWAGE DISPOSAL.

The only part which has a regular system of sewers is Alkerton, in the parish of Eastington. Certain surface water drains, however, appear to have been converted into anomalous sewers by long usage as such, notably at Saul and Frampton-on-Severn, and these have given considerable trouble from time to time. The custom of using highway drains as sewers is also not uncommon in this district and is likely to lead to more trouble in future. The usual type of closet is the privy vault, probably never watertight. Reference is made to the pollution of the soil and the danger to wells from these conditions.

RIVERS POLLUTION.

The Frome receives the effluents from certain industries and pollution from slop water; other small streams are all polluted by cattle and probably otherwise.

WATER SUPPLY.

As has been emphasized in successive Annual Reports certain parts of the district are badly supplied with water. The western portion is entirely dependent on rainwater or shallow wells, while the eastern portion is in part supplied by local springs or wells and in part by the Stroud Water Company. After detailing some of the local circumstances and dangers, Dr.

Ashley observes under those circumstances it is a public duty to supply a district with good water if practicable means are available and to protect the more ignorant of the residents from the dangers of their own indifference. Owing to complaints, especially in Whitminster and Moreton Valence, the question of extending the Standish Park Mains was raised at a meeting of the Council: they were unwilling to undertake the work, but suggested to the Parish Council that they should consider the question of forming a special water area for Moreton Valence, but by the end of the year no reply had been received.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 9 slaughter-houses (an increase of 3), 30 dairies, &c., 9 bakehouses and 19 workshops (an increase of 7). The slaughter-houses are of the character usually found in rural districts and in some cases there is room for improvement. The condition of some of the farmyards was appalling, but the dairies are for the most part satisfactory and are kept in a very cleanly state.

INFECTIOUS DISEASES.

Sporadic cases of scarlet fever occurred early in the year and in May a group at Stockend: the infection in this group probably originated in Painswick Edge School. An outbreak at Longney occurred amongst relations. The infection in a case of enteric fever was probably contracted in one of the large towns.

ISOLATION HOSPITAL.

Reference is made to the arrangement under which cases may be received by the Stroud Joint Hospital Board at £3 3s. weekly for each patient: no cases were sent during 1913, but it is said that the arrangement may be useful where the infected house is a bakehouse, dairy or similar establishment. Otherwise discrimination as to removal of cases is difficult.

In the great majority of instances efficiency of isolation in a private house depends more on the intelligence of the person who is acting as nurse than on the number of inmates and bedrooms.

WINCHCOMBE RURAL DISTRICT

177

(GLOUCESTERSHIRE PART).

Area 55,529 Acres. Assessable Value : £48,116. 1d. Rate : £200.

Population 1901 ... 8,709

1911 ... 9,531

Increase 1901-11 ... 822 (9.4%)

Estimated Population 1913 ... 9,531

Medical Officer of Health ... W. Cox, M.R.C.S.

CHIEF GEOLOGICAL SUBSTRUCTURES: Lower Lias to Greater Oolite.

CHIEF INDUSTRIES: Agriculture, market gardening, fruit cultivation, paper mill, fruit canning factory and leather and tanning factory.

HOUSING.

Three hundred and eleven houses have been inspected in Bishop's Cleeve, Cutsdean, Alderton, Gretton and Greet, and nearly all found to have some defect. The Council gave instructions to the Sanitary Inspector not to report until he had completed the whole of the inspections, unless the house is positively dangerous. In December Dr. Cox made a general report on the housing accommodation for the working-classes in the district, and concluded that the following villages are in need of attention and, in point of urgency, in the order given :—Snowhill, Gretton, Winchcombe, Alderton, Lower Guiting, Beckford and Cutsdean. The Council held Local Inquiries in Winchcombe, Alderton and Beckford, and are arranging for a number of houses to be built in each place.

SEWERAGE AND SEWAGE DISPOSAL.

WINCHCOMBE.—Forty-five houses were connected. Though the scheme was completed in 1911, there are still 127 houses not connected.

WORMINGTON.—Twelve houses were connected.

REFUSE DISPOSAL.

No scavenging is undertaken, but a system would be a great advantage in Winchcombe.

WATER SUPPLY.

ALDERTON.—There is a good supply from wells but they are amongst drains and farmyards, pigstyes, &c., and so are liable to pollution; in 40 years Dr. Cox has not found any pollution nor has there been any illness to suggest it.

LOWER GUITING.—The scheme is in course of completion.

A comprehensive scheme has been prepared for the supply of Alderton, outlying parts of Winchcombe, Cleeve Hill and Bishop's Cleeve from Stanway, and a Local Inquiry into an application for a loan of £17,000 was held at the end of the year; the report has not yet been received. Generally, Dr. Cox regards the water supply of the district as good: the villages on the hills have springs and those in the vale are mostly supplied, by gravitation, from the hills.

PLACES OVER WHICH THE COUNCIL HAVE SUPERVISION.

These include 6 slaughter-houses (an increase of 1), 48 dairies, &c. (an increase of 1), 11 bakehouses and 13 workshops. It is said that great attention has been given by the Council to dairies and cowsheds and that there has been a great improvement in them; the milk sent away from the district to large towns has greatly increased.

INFECTIOUS DISEASES.

Four cases of diphtheria and 20 cases of scarlet fever were notified. Dr. Cox says the infectivity of scarlet fever has considerably lessened during the past 25 years and predicts

that, in course of time, the disease will almost, if not entirely, die out; he wishes he could say the same of measles.

ISOLATION HOSPITAL.

All the cases of diphtheria and scarlet fever were removed. The hospital is very useful; although the up-keep may seem heavy, it has been the means of saving the district many times from a serious and costly epidemic.

A discharging block and disinfecter are wanted.

SCHOOLS.

The sanitary condition of the schools is good with the exception of Hawling, which accommodates less than 20 children, and some necessary improvements are to be made. Five schools were closed on account of the prevalence of measles.

INFANTILE MORTALITY.

Dr. Cox refers to the excellent work done by District Nurses, and says the reduced infantile mortality is, to a large extent, due to their care and advice.

